American Aviation

25c *The News Magazine of Air Transportation* March 15, 1948

More on D.L.B.

HERE ARE a few final pertinent observations about the policy and activities of David L. Behncke, president of the Air Line Pilots Association.

1. Many sincere and conscientious members of ALPA say "print *our* side of the story" when any criticism of Dave Behncke is made. In this issue we print the full text of Dave Behncke's letter of Feb. 23 to his membership on the subject of the National Airlines strike. This letter should give better than anything else his point of view. We recommend that everyone read it. It proves better than anything we know just what we've been cautioning the pilots—that their leadership is destructive, undignified, confused—and that this leadership is heading both pilots and industry into endless labor warfare over relatively minor issues.

by W. W. P.

2. The fundamental issue at stake is not that of ALPA itself, or any union whatever its name. Airline pilots have every right to have a union, to engage in collective bargaining, and to achieve every reasonable economic gain and conditions of employment to which they and any similar group are entitled. The fundamental issue is whether the union by a one-man dictation at the top is going to embroil the industry as a whole in a predetermined policy of "at least a strike a year," to ruin individual companies financially, and to carry on a constant economic warfare using low-grade hod-carriers' union tactics which rip apart the dignity which belongs inherently to the pilot profession.

3. ALPA members very rarely get the whole story of any dispute from Dave Behncke. The gravest and most damaging evidence of this is Behncke's own letter to his membership which we reproduce in full in this issue. *There is not one single word or reference to the 24-hour strike notice which he leveled at National in May, 1947, or to the binding agreement signed by ALPA and National in the offices of the National Mediation Board in Washington on May 14, 1947, requesting NMB to appoint a neutral to settle the grievance procedure once and for all. And not one word about the fact that Dave Behncke called a top NMB official by long distance telephone after NMB had appointed a neutral and objected to the neutral designee.* Can any member

(Turn to page 8)

MCA Maintenance Veteran

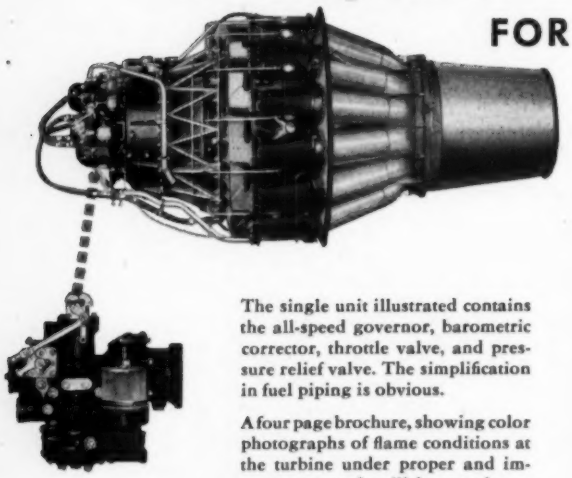
A top-notch maintenance department under C. H. Calhoun, vice president-maintenance and engineering, is a major factor in Mid-Continent Airlines' current campaign for on-time performance. Calhoun, now in his 20th year in airline maintenance, joined MCA in 1943 after 14 years with TWA. See page 14 for article on MCA's Five-Star Program.

In This Issue

MANAGEMENT SALES OPERATIONS

with Speed-Density Fuel Control

FOR JET ENGINES



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FORTNIGHTLY REVIEW

Intensive systemwide campaigns are now underway among the scheduled airlines to improve on-time performance. Schedule reliability should soon become a prime selling point, along with speed and passenger service. (Page 13)

An all-out drive to provide a "new look" at its stations and a new outlook for its passengers has been launched by Mid-Continent Airlines. "Our Service Is Showing" is the slogan of MCA's 5-Star program. (Page 14)

The official ALPA view of the National Airlines pilot strike is given in text of a letter sent to all ALPA members by David L. Behncke, and reproduced here in full. (Page 16)

The problem of controlling volume air traffic is outlined in first of two special articles on the program recommended by the Radio Technical Commission for Aeronautics. (Page 24)

Scheduled air carrier landings and take-offs accounted for 34% of total operations at the nation's 25 leading air terminals in 1947. La Guardia retained its position as busiest airport in country for airline traffic. (Page 33)

More than 100% increase in freight volume this year over last is anticipated by the nation's leading air cargo carriers. (Page 36)

•

Less for CAA, More For CAB

Backing up the Appropriations Committee 100% in its $55,200,000 cut of Civil Aeronautics Administration funds for the fiscal year 1949, the House Mar. 5 went a step further and eliminated an additional $2,608,000 which involves development of the Greater Ft. Worth International Airport, between Dallas and Ft. Worth, Texas.

As passed, the appropriation bill provides CAA with $97,762,000 beginning July 1, 1948—a sum which is $21,652,334 less than the 1948 fiscal appropriation and $57,808,000 less than the amount recommended by the Budget Bureau. Actual cuts are offset somewhat by the fact that the House approved $34,392,000 for contractual authority in carrying out the Federal Airport program after appropriating only $3,000,000 in cash for the 1949 program. Likewise the House allowed only $10,090,000 for establishment of air navigation facilities but provided an additional $12,000,000 for contractual authority.

The $2,608,000 was eliminated from the recommended $37,000,000 appropriation for the contractual phase of the Federal Airport program on motion of Rep. J. Frank Wilson (D., Dallas, Tex.) who charged CAA with attempts to waste funds on an airport that was not needed. Airlines serving the area were reported backing Ft. Worth because the present Meacham Field, at Ft. Worth, will not accommodate four-engined planes. Rep. Wingate Lucas (D., Ft. Worth, Tex.) fought a losing battle to prevent the amendment from passing and saw his own motion which would have cut Love Field, Dallas, from all Federal funds, including those needed for operation of the control tower and runway lights, overwhelmingly defeated.

The $3,400,000 recommended for the Civil Aeronautics Board was approved by the House. This amount represents a $400,000 increase over 1948 funds and provides a $2,000 a year increase in the salary of the Chairman of the Board.

•

PO Opposes Rees Parcel Post Plan

While endorsing air parcel post generally, Postmaster General Jesse M. Donaldson told a House Post Office and Civil Service subcommittee Mar. 8 that he definitely opposed provisions of the Rees bill under consideration which would establish the service under contract-bid procedures. Donaldson expressed the opinion that the

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AMERICAN AVIATION

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WAYNE W. PARRISH

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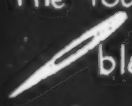
Other Publications

American Aviation Daily (including International Aviation): Published daily except Saturdays, Sundays, and holidays. Subscriptions: $15 one month; $170 one year. Clifford Guest, managing editor.

American Aviation Directory: Published twice a year, spring and fall. Single copy $5.00. Dallas R. Long, managing editor.

American Aviation Air Traffic Guide: Monthly publication of airline schedules, rates and regulations. Subscriptions: U. S. and Latin America $7.50 one year; Canada $8.00. All other countries $9.00. Published from editorial offices at 139 North Clark St., Chicago 2, Ill. State 2154. H. D. Whitney, managing editor.

INDEX

Later this year the first of 36 fast and luxurious Boeing Stratocruisers  will be plying the airways equipped with dependable Hamilton Standard  Hydromatic propellers.  These 60-passenger airliners will see service with three great airlines — Pan American Airways  , Northwest Airlines  and B.O.A.C.  The four reversible propellers,  with their hollow steel  blades, automatic synchronization  and electric de-icing  provide a weight-saving of more than 650 pounds per plane.  As a result, the airline operators  will be able to take on the equivalent of three extra  passengers, haul that much  extra cargo, or carry an additional 100 or more gallons of gasoline  for added range — all of which means more revenue  for the airlines.

HAMILTON STANDARD PROPELLERS

EAST HARTFORD, CONNECTICUT

One of the four divisions of United Aircraft Corporation

(CONTINUED FROM PAGE 4)

pending bill would be an invitation to the type of cut-throat competition which characterized the letting of air mail contracts prior to the so-called air mail scandal of 1934.

Asserting that the Post Office Department did not wish to appear in the role of an advocate of air parcel post service, Donaldson said the Department would favor inauguration of such service on the basis that it would enable the Post Office to use air mail space on planes paid for under non-compensatory rates but not utilized and because it would make available to the public a service should they desire to use it. But he made it plain that he would not favor establishment of such a service unless it was at rates which would guarantee the Post Office Department against any loss.

Criticism for State Dept. Air Activities

The House Appropriations Committee on Feb. 27 told the State Dept. to get out of the operating phases of activities relating to regulation and control of aviation. The committee found "little or no justification for there being located in the Department an Aviation Division with 30 employes, or a Shipping Division with 21 employes, or a Telecommunication Division with 26. The substantive work in connection with all of these functions is undoubtedly performed in the departments of the government responsible for these types of activities." T. P. Wright, former CAA administrator, had told the committee that there is "too much tendency for the State Dept. to get into the technical field" in aviation matters.

Names in the News:

T. P. Wright has officially left his post as Administrator of Civil Aeronautics in keeping with his resignation submitted in mid-January. **Fred B. Lee,** deputy administrator and one of those prominently mentioned as likely successor to Wright, has taken over duties as acting administrator.

Notes in the News:

Air Force and Navy have agreed with Port of New York Authority to limit their free aircraft movements (landing or take-off) at N. Y. International Airport (Idlewild), La Guardia, and Newark to combined total of 300 a month. Over this number, the services will pay the regular established tariff for transient aircraft . . . Total of **3,163 complete aircraft** valued at $74.6 million and 4,138 engines worth $18.1 million were exported by U. S. companies in 1947, according to official figures of Bureau of the Census . . . With Latin American nations participating for first time, top event on the 1949 program of the **Miami All American Air Maneuvers** is planned to be a $25,000-$50,000 free-for-all race around South America, similar to the Bendix Trophy Race in this country . . . **The Curtiss XP-87,** reportedly the largest fighter plane ever built and first to be powered by four jet engines, has completed its first flight test at Muroc Army Air Base, Calif. The huge fighter, which weighs almost as much as the 27-ton B-17 Flying Fortress and is designed for the 600 mph class, was aloft 57 minutes . . . **Stinson Division** of Consolidated Vultee Aircraft Corp. and **Cessna Aircraft Co.** will be first two lightplane manufacturers to receive cross-wind landing gear manufactured by Goodyear Tire and Rubber Co. . . . Shipment of **462 personal aircraft** by 13 companies during January has been reported by Personal Aircraft Council of Aircraft Industries Association. Nearly half of total—211—were four-place planes. December shipments totaled 520.

International

Court Investigates Tudor Loss

A formal court investigation under air navigation regulations will be held in Great Britain to look into circumstances surrounding disappearance of the British South American Airways' Tudor IV between the Azores and Bermuda several weeks ago. This will be the first such investigation since 1930, when the airship R-101 crashed in France. Accidents customarily are investigated by the chief inspector of accidents.

First Class Mail for African Feeders

Feeder airlines being established in South Africa will carry first class letter mail at normal surface rates wherever the air service will speed delivery. First feeder, expected to be operating by June 1, will be Commercial Air Services, covering the area between Johannesburg, Durban, Bloemfontein, and Basutoland. Company plans to use Cessna 195 aircraft.

South Africa Plans Service to U. S.

Union of South Africa has decided to exercise its rights under the bilateral air transport agreement signed with U. S. last year and will invite bids from private carriers and South African Airways (government-owned) to operate a scheduled trans-Atlantic service.

Possibilities of South Pole Routes Explored

With occupation last month of Prince Edward and Marion Islands in the Southern Indian Ocean by Union of South Africa, and occupation of Heard Island by Australia, there was talk in both dominions of plans for establishing a new air link with Great Britain via the Antarctic, if the Middle East route should be closed by war or threat of it. Occupation of these islands opens the possibility of a route from Australia to England via Heard, Prince Edward and Marion Islands, and South Africa.

IATA Clearing House Handles $52 Million

Transactions totaling $52,400,000 were handled by the London clearing house of the International Air Transport Association in 1947. The service was said to have saved its members three times the annual cost of operating the institution. Last year's volume was settled by payments of only 18%, or $9,600,000 in cash. On December transactions alone, protection from losses which would have followed recent devaluation of the French franc saved the 24 members a total of $132,000.

BOAC Gives Aid to National Companies

British Overseas Airways Corp. is giving technical assistance to numerous national airlines, including advice on choice of aircraft, operating technique and ground organization. Currently BOAC has 50 flight crew members attached to foreign and colonial airlines.

In the Orient, BOAC was instrumental in forming Hong Kong Airways to operate locally between Hong Kong, Canton, and Shanghai, and has been asked to participate in the capital of Malayan Airways, Singapore. In the Middle East, BOAC is technical adviser to Iraqi Airways, Iraq, which is now flying Doves and Vikings. Iraq nationals are being trained in England for ground positions, and the newly formed Sherkat Sahami Oghab (Eagle Air Lines) of Iran has asked BOAC for similar assistance. In Africa, BOAC serves as adviser and purchasing agent in the U.K. for East African Airways Corp., Nairobi, owned by Kenya, Tanganyika, Uganda, and Zanzibar; and for West African Airways Corp., owned by Nigeria, the Gold Coast, Sierra Leone, and Gambia.

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EDITORIAL

(CONTINUED FROM PAGE 1)

of ALPA possibly justify the brazen omission from this letter, outlining the reasons for the National strike, of the most pertinent crucial developments in the entire dispute?

4. There are two highly important issues in the National strike, both of which Dave Behncke blithely skips over, twists to suit himself, or ignores altogether.

A. The first is management's prerogative on the basis of safety to transfer from a flying job to a ground job a pilot involved in a serious accident in which a plane-load of passengers miraculously escaped drowning. Behncke's letter says the accident was a "minor" one costing National perhaps $15,000. But the Lockheed Lodestar was a total loss and a Lodestar in 1945 was selling for above $70,000. And one can hardly classify as "minor" an accident involving a transport plane loaded with passengers which skids on a runway and goes into a bay tail first and is prevented from sinking only because a propeller catches on the stone barrier, thus enabling passengers and crew to climb out. And has Behncke distributed to his members the report of the CAA control tower employes which was made and signed within an hour and a half after that accident at Tampa on Sept. 13, 1945?

B. But one can even assume that National Airlines' management was *dead wrong* in taking the pilot off flying duty. The issue now at stake is *not* whether National is right or wrong, or whether the pilot was right or wrong, or even whether ALPA was right or wrong in seeking the pilot's reinstatement. The fact of the matter is that National *did* sign a binding agreement with ALPA in the offices of the National Mediation Board to have a neutral decide the rights and the wrongs of the dispute and it was Behncke, not National, that objected to the neutral which NMB appointed after both parties had agreed to accept whomever NMB appointed. The interesting point is that Behncke doesn't tell his members these stories.

5. Is the strike against National *really* over a fired pilot or is it a plan conceived long ago by Behncke to strike against the company. Let Behncke answer this himself from his own letter of Feb. 23: "The pilot trouble with Baker dates back to the start of his airline years ago." And, "To begin with, the showdown on Baker had to come sooner or later. That is a certainty." Is it a grievance case over a pilot, or is it a personal test of power by Dave Behncke against G. T. Baker, with the ALPA members forking over the dough for benefits to the strikers.

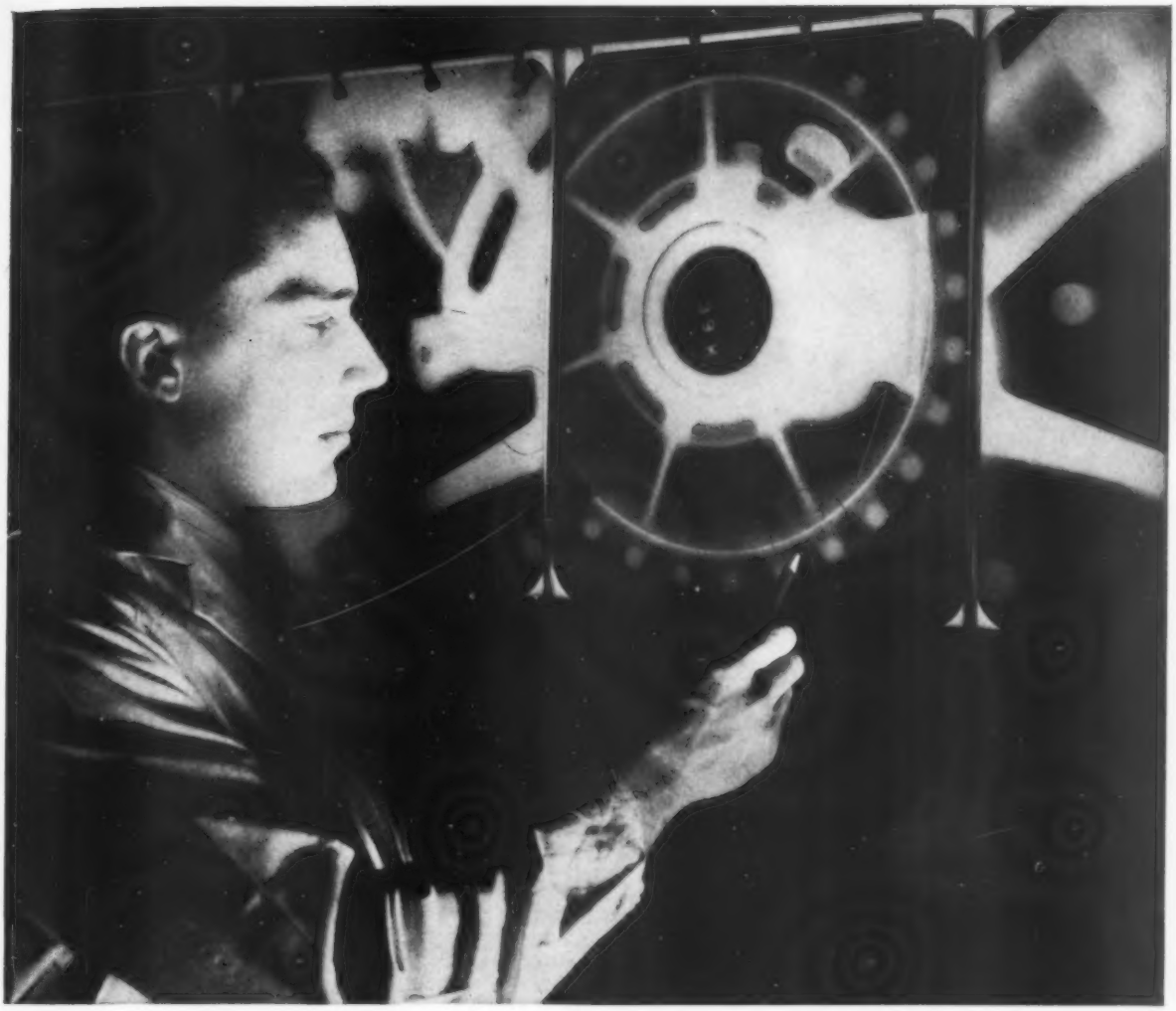
6. ALPA has begun distribution of leaflets urging passengers on National and the interested public to ask the National Mediation Board in Washington in writing or by telephone for "the facts" of the National strike. Do ALPA members know that NMB is *not* answering those letters, that NMB was *not* consulted by ALPA in this matter, and that NMB says such a procedure is "most unusual"? We suggest that ALPA members independently ask NMB for "the facts" in the National strike and ask themselves if this was an honest procedure as far as the public is concerned.

7. In the early days just before ALPA was formally organized David L. Behncke was known by the code designation of "Mr. K." ALPA members will find in Volume I of the Air Line Pilots Bulletins (1931-32), Mr. K's remarks made on July 28, 1931, in which he said in part: "When we get into this thing in the matter of cold-blooded facts, we are up against two things. There is a definite line in any civilized nation and that is Capital and Labor. That which is Labor cannot be Capital and that which is Capital cannot be Labor." And under date of May, 1932, Mr. Behncke wrote a "dedication" to be placed in Volume I of the bulletins in which he said in part: "For today, we see the dawning of a new era in a new industry and profession . . . we see the air worker . . . his status properly recognized and collective representation acknowledged *before capitalistic domination becomes evident.*" (The italics are ours.) Isn't this archaic class war stuff? Are those American thoughts in America? Are pilots engaged as peasant workers in a war to the death with capitalism? We're just asking the questions.

8. The world situation is critical. This country has entered into a phase of defense preparedness which involves offensive striking power. Is there any doubt that air transport is one of the most vital elements of national security? Is there any possible reason to think this country will stand for an air transport system constantly embroiled in labor troubles? Does a *wise* labor leader constantly stir up trouble or does he help an industry grow so that his membership can also grow? Today the pilots are high-level civilians, but the best possible assurance of pilots and the industry being moved swiftly under military jurisdiction is a continuation of low-grade hod-carrier union tactics such as Dave Behncke has apparently chosen as his unswerving policy.

9. The pilot members of ALPA hold the answer. Whether they regain the respect of the public as intelligent well-to-do free Americans or whether they tend downward to the humiliation of picket lines, smear campaigns and goose-stepping on orders from a high command, is up to them. We believe the majority of ALPA members have started looking below the surface of ALPA headquarters camouflage. We've tried to provide ample tips and leads. A constructive, forward-looking association or union with an American policy, can be a great help to aviation, the country, and the pilots themselves.

WAYNE W. PARRISH.



X-RAYS GET THE INSIDE STORY

▸ This Wright technician is reading an X-Ray negative of a vital engine part. The penetrating X-Ray has revealed a small flaw *inside* the casting — where the sharpest human eye would never see it.

▸ But like your family doctor, the Wright engineer is more interested in preventing trouble than in curing it. The findings of X-Ray are not limited to the rejection of parts. Information about the behavior and qualities of metals is passed along to the foundryman, the forgers, the countless others who make the parts.

▸ Better parts are the logical — and permanent — result. Technicians in the Wright Aeronautical laboratories X-Ray thousands of parts each month and 40 exposures are made on some of the more intricate pieces.

▸ Another example of the care — the instinct for perfection — used in development of Wright aircraft turbine and reciprocating engines.

POWER FOR AIR PROGRESS

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BACKGROUND & TRENDS

Comments Coming: Comments on report of the President's Air Policy Commission are now being prepared for the White House by various government agencies concerned with aviation. Included will be recommendations on legislation to carry out the proposals. The reports are expected to go to the White House separately, not as an Air Coordinating Committee document.

Being Studied: *Analysis of the Congressional Aviation Policy Board report is being undertaken by Board staff members to ascertain what legislation will be required to put the proposals into effect. When the study is completed, the Board will communicate with all departments and agencies of the government affected by the report, as well as the Congressional committees which have jurisdiction over the matters involved.*

Behind Report: Major credit for basic thinking behind the Congressional Aviation Policy report is given to Rep. Carl Hinshaw (R., Calif.), vice chairman of the Board. He wrote the chapter on combat aviation, and his tenacity in getting military aviation brass to think in terms of unified action should go a long way toward making unification of armed services a reality.

Disbursing Problem: *While Air Coordinating Committee is expected to accept the air traffic control report of Radio Technical Commission for Aeronautics, difficulty may arise in deciding what government agency is to disburse the funds involved, so that Congress may be asked for an appropriation. Military services may not want contracting authority entirely in hands of a civil agency, and vice versa. Under present ACC practice, votes must be unanimous.*

Assessments Lagging: There are some indications many airline pilots are not coming through on ALPA assessment which would give National pilots benefits ranging up to $500 a month. Pilots on Pan American's Latin American Division are reported to have refused to pay up for either American Overseas or National strike benefits.

Star Routes: *CAB has told Post Office Dept. that it recognizes need for establishment of aerial Star Routes in certain sections of U. S. But, CAB wants PO to clear Star Routes with it to avoid overlap with regular routes or lines that might be established. CAB wants cancellation clause in Star contracts, in case regular service is opened later.*

Adams for CAB: Washington circles generally assume that Russell Adams, chief of the CAB economic bureau, will be nominated to succeed Harllee Branch on Civil Aeronautics Board. Adams is highly regarded, and such nomination would have support in both industry and government.

Unique: *Only certificated airline (excluding feeders) without any application pending for route extensions or new routes is Western Air Lines. CAB disposed of last pending WAL application in the Arizona decision.*

Equipment Needs: Capital Airlines, which has been analyzing its equipment situation, expects to decide soon how many new twin-engined aircraft it will need, and what type. Steps will then be taken to obtain necessary financing.

Obstacles: One of the nice things about the prairies is the absence of terrain obstacles. But right in the midst of the flat corn country outside Des Moines, a 1500-foot television tower is to be erected, the tallest man-made structure in the world. At Minneapolis a 625-foot television tower is to be erected not too far from the field, approved, incidentally, by the state aeronautics director. Both towers will definitely be hazards to airmen.

Aviation Hazard: *William A. Patterson, president of United Air Lines, broke his arm the other day while trying to crank the tractor on his farm.*

Model Lease: A model airport-airline lease agreement emphasizing actual use rather than scheduled frequency is expected to be adopted soon by executives of the National Institute of Municipal Law Officers for recommendation to its nationwide membership as basis for negotiating future airport leases. The airlines have argued strongly for continuation of the lease now commonly used which bases charges on the number of scheduled flights per month, whether performed or not. NIMLO officials claim that the present arrangement makes no allowance for extra or non-revenue flights and thus does not bear an actual relationship to use.

100th Convair: The 100th Convair-Liner has been started in assembly fixtures at Consolidated Vultee's San Diego plant. Pan American and Western Air Lines are slated to receive their first planes in about 10 days and deliveries to seven other domestic and foreign carriers will start soon. American Airlines has received five of the 75 in its order, and is basing them at Ardmore for pilot and crew training. The transports are moving off the assembly line at rate of one every two days.

Constitutions to AF: *Navy's plan to release its two Lockheed Constitutions to Air Force following merger of ATC and NATS may present some complications. AF is not believed to have funds to operate the big transports, and it has been suggested that Navy may have to provide such funds for a couple of years. It is expected that the Constitutions will be used by Military Air Transport Service, the combined ATC-NATS setup.*

Sales Campaign: *U. S. airlines are planning extensive sales campaigns for trans-Atlantic travel, based on French government's recent revaluation of the franc. TWA, for one, has set up a solicitation campaign directed toward known sources of international travel, emphasizing what revaluation of the franc means to tourists.*

GCA Order Near: CAA is expected to announce shortly purchase orders for eight precision beam and eight surveillance type radar sets. Bids have been received, but actual orders await approval of CAA's proposal to use $1,600,000 of $3.5 million left from last year's air navigation facilities fund to purchase eight of each of the sets instead of two precision beam and four surveillance units formerly budgeted. CAA says it can save nearly one-third in unit cost by buying in larger lots.

Anniversary: *Airlines and the Post Office Dept. are working on plans for big celebration May 15, marking 30th anniversary of establishment of first air mail service.*

They added wheels to subtract weight

To trim the Navy's Constitution to fighting weight, Lockheed design engineers needed the lightest possible landing gear equipment. At the same time, this equipment had to provide maximum safety and comfort for the 180 passengers carried by the long range transport.

Studying the problem, B. F. Goodrich and Lockheed engineers came up with a new design—*tandem twin* wheels for the main landing gears, duals for the nose. That's 10 wheels in all. By using more—and smaller—wheels, engineers shaved a *ton* off the Constitution's weight!

In addition, B. F. Goodrich tandem twin wheels have five other big advantages: 1) *greater safety*—if one of the four tires goes flat, the pilot's control of the plane is unaffected; 2) *greater economy*—even in landings with one twin tire flat, the wheel and often the tire are still good for additional service; 3) *more comfort*—with four air chambers, landings are smoother; 4) *better design*—the four small wheels take up less space when retracted; 5) *better load distribution*—with the load distributed over a greater area, very thick runways are not needed, more airports can be used.

Besides multiple wheels—a 16-year development project of B. F. Goodrich engineers—the Constitution also uses B. F. Goodrich Expander Tube brakes and Rotovane tires. Expander Tube brakes are simpler in design, lighter in weight and easier to maintain than other brakes. Rotovane tires—the first commercial pre-rotation tires—reduce landing shock, lengthen tire life and make possible lighter landing gears.

All these developments are the result of B. F. Goodrich research—the research that works constantly for better and safer flight. *The B. F. Goodrich Company, Aeronautical Division, Akron, Ohio.*

B.F.Goodrich
FIRST IN RUBBER

Established June 1, 1937 **AMERICAN AVIATION** Volume 11 Number 20

Airlines Aim for Improved On-Time Performance

With the exception of safety itself, dependability of service is becoming the major operating goal of U. S. scheduled airlines. Schedule irregularity which has long put the airlines at a disadvantage in comparison with surface means of transportation is now under attack by systemwide campaigns underway among several carriers.

The goal is to fly by the clock, recognizing that the traveler who buys an airline ticket buys *time* and that he is not receiving full value for his money when flights are late.

What on-time performance means to the airlines dollarwise was emphasized in the recent report of the Congressional Aviation Policy Board: "In fiscal 1947-48, the commercial airlines, operating about 1,000 aircraft, will lose approximately $40,000,000 due to air traffic congestion delays, flight cancellations and schedule unreliability. If the air traffic control system remains essentially unchanged, the loss that could be expected during the next 15 years would amount to more than $600,000,000."

Modernization of the airways traffic control system will require several years, at least, but there is increasing awareness that technology is not the whole solution to the problem and that there is room for improvement within the framework of the existing system.

Virtually all carriers are devoting increasing attention to such improvements. For one, Braniff has an intensive campaign underway to increase on-time performance. Since it is essentially a short-haul line (average passenger flight is 340 miles), a flight postponement or even a combination of small delays might more than wipe out the time advantage its passengers presumably are buying when they decide to travel by air.

Mid-Continent Airlines has a 10-week drive in progress to make schedule reliability and passenger service top objectives in 1948. (See page 14 for special feature on MCA's 5-Star Program).

Northwest Airlines' plan to give its passengers a 5% rebate on all domestic flights arriving at destination more than 30 minutes late is that company's answer to building public confidence in airline dependability. The program was scheduled to go into effect Mar. 15, if approved by CAB.

Systemwide departures of United Air Lines planes were 79% on time the first seven weeks of this year, compared with a showing of 68% for the same period last year. Delay times ran as follows: 12% of departures, five to 15 minutes late; 2.5%, 16 to 30 minutes late; 2%, 31 to 60 minutes late; 3.5%, over an hour late.

At La Guardia Field, one of the chief trouble spots for delays, a recent check by United's agent, Don Wilson, showed that of 106 arrivals and departures, 93 were on time or ahead of time. In addition to a special effort to speed up baggage deliveries to and from planes, a major factor contributing to this improvement was adoption of a regulation requiring crews to board planes and make their engine and check-list tests 20 minutes before passengers come aboard. A similar rule is in effect at other points served by United, except that the boarding is done 15 minutes before scheduled departure time instead of 20.

To permit assignment of general responsibility to the department or departments involved, delays were grouped into three general classes: (1) *Controllable-stations*: Including delays attributable to passenger handling, cargo loading, ticketing, etc. (2) *Controllable-other*: Including mechanical breakdowns, equipment unavailability, and connection delays outside the station's control. (3) *Non-controllable*: Weather, ATC, field traffic delays. The committee checks into each individual delay, obtaining all available facts and instituting prompt corrective action.

At Dallas, focal point of all Braniff flights, complex connections and inadequate facilities and personnel had in the past led to a particularly serious delay condition. As a beginning, the On-Time Committee has assigned three additional experienced assistant station managers to Dallas, has increased operations personnel by 10%, has assigned a maintenance inspector to the station to reduce mechnical delays on through flights, is adding $35,000 of mechanized ramp equipment, has increased the inventory of frequently-needed parts, has given refresher courses to stockroom employes and has made other improvements.

The importance of clock-watching for on-time performance is stressed by Braniff in intra-company correspondence.

American Airlines, too, is reporting progress in reduction of departure delays, which ran to 18% of scheduled departures at La Guardia in January, as compared to 33% the same month last year, and now run to about 18% systemwide. Some of the factors contributing to this improvement are speedier loading of mail, pushing back of the cargo loading break-off time to well below departure time, and keeping of spare equipment in a more conveniently accessible place.

To direct its program, Braniff last December set up on On-Time Committee headed by D. B. Myers, Jr., assistant to the president, and composed of all departmental heads. Meeting at least once a week and with powers to correct existing policies and practices as they see fit, this group in three short months has achieved laudable results.

During the first four weeks of the On-Time program—Dec. 20 through Jan. 17—total delays of Braniff departures were cut almost in half, station-controllable delays were cut to approximately one-third, and all other delays were reduced.

A special facility soon to be put in use at Dallas and later at other Braniff stations, is a visible "control tower" presided over by an operations supervisor who will direct and coordinate all ground operations pertaining to fueling, commissary and loading and unloading of baggage.

Reports are that virtually everyone in the Braniff organization—pilots, stewardesses, dispatchers, reservationists, ramp attendants—has caught the spirit of the On-Time campaign, and all are doing their respective bests to justify use of the slogan "Braniff's On Time."

On an industrywide basis, the Air Transport Association is now collecting data from individual airlines to show improvements in schedule reliability. The findings are expected to form the basis for an intensive publicity campaign on the part of individual airlines, aimed at showing that improved reliability is a prime selling point, along with speed and luxury service.

MCA's 5-Star Program

By WAYNE W. PARRISH

Mid-Continent Airlines is one airline that has gone to work to make its schedule reliability and passenger service the No. 1 order of business for 1948.

On Feb. 20 it launched an all-out campaign to provide a "new look" at its stations and a new outlook for its passengers. It's a 10-week system-wide drive with the catchy slogan of "Our Service is Showing."

On the date the drive was launched, I began a long overdue tour over most of the company's system and found a very evident effort on the part of MCA employes to provide a "new look" for passengers. I was also quite pleased to learn that the 10-week drive had its origin in the editorial "Let's Go to Work" which appeared in the Jan. 1 AMERICAN AVIATION.

The campaign has five major points and there's a poster at each station on the system to keep everybody reminded of the goals. Here's the line-up:

"OUR SERVICE IS SHOWING"

Keep it growing
with this
5-STAR PROGRAM

NO DELAY TODAY
Don't be late in '48—Keep on schedule—Delays cost money

BE POLITE—TELL 'EM RIGHT
The service year is here . . . Be friendly, courteous and helpful

GET THE NEW LOOK
Appearance sells . . . . Clean up and paint up . . . Wear that uniform

STANDARDIZE AND SIMPLIFY
The right way is the best way . . . Follow all company procedures

COOPERATE IN '48
MCA's interests are our interests . . . Let's all work together

In a letter from the 5-Star general committee, the drive's aims are explained:

"The year 1948 is a real challenge to all business. Most companies will be looking for ways and means of putting their houses in order and of increasing efficiency. Success will come to those who find a way. In the transportation industry, Mid-Continent will be competing for business with the bus lines, the railroads, private automobiles, and other airlines. How can we meet this challenge?

"We are offering you a 5-Star program whose objectives we have attempted to reach at various stages in our development. However, the time has now come when it is imperative that we reach all of them. If this program is to succeed, we must all spend some time in studying ways of ironing out the rough spots in our jobs. The success of this 5-Star program depends upon 100% participation of all employes.

"Our general slogan is 'Our service is showing.' But how is it showing and does it show to our advantage? We must keep it growing so that the traveling public will consider Mid-Continent first in service and dependability.

"We are in a great industry with a great future. In the maze of daily programs we sometimes forget what made the industry great. Let's get back to our objectives. Achieving them in the past was fun. It can be fun again. Let's roll up our sleeves and go to work."

Posters Dramatize MCA's Campaign.

Directing the Drive. Every MCA department is represented on the general committee. Chairman is Ralph E. Wilson, supervisor of training. Assistant chairman is C. H. Bollinger, training instructor. Other members are:

Rex Aber, superintendent of reservations and ticketing; G. M. Wilson, chief reservations clerk, regional; W. H. Glenn, chief clerk of the traffic dept.; Oleva Hastings, chief of the news bureau; James G. Swarts, Jr., ass't. to the director of public relations; Beth Renfro, chief hostess; R. P. Harris, chief pilot; Lawrence Klingler, crew chief, Kansas City; D. M. Patterson, supervisor of stations, southern region; A. H. Gilbertson, supervisor of stations, northern region; A. A. MacDonald, chief dispatcher; Jack W. Seay, superintendent of stations, and A. W. Burgess, station auditor.

At every station there is a local 5-Star committee. A member of the general committee has now met with personnel at every station to explain objectives and kick off the special service effort. Weekly newsletters called "stargrams" are being attached to the initial posters and will explain each of the starred points as it is emphasized. The newsletters will be utilized to give news of the campaign, recognition of noteworthy achievements, and to guide local committees.

Results of the program will be checked by members of the general committee and other departmental supervisors. J. W. Miller, MCA president, is enthusiastic about the program and believes it will make a real contribution to MCA efficiency.

Good Impression. From what I saw of MCA after flying over 2,560 miles of its routes (all except Kansas City-New Orleans, Huron-Minot and a few small segments), it is a well-run organization. I made 19 of the 29 stations and despite the normally unfavorable weather at this season of the year, no plane arrived or departed more than a few minutes off schedule.

At several points I actually saw ground personnel running to service the airplane. Maybe it was because of the cold weather, maybe it was a temporary alertness because of the 5-Star campaign. But it made a good impression.

Going south from Kansas City to Houston, the crew consisted of Capt. W. E. Pate, 1st Officer J. P. Giberson and Miss H. Rogers. At the first stop, Tulsa, Vic Kropff, formerly with Pan American and now assistant to the president of MCA, was in the station and I paid my usual respects to Charlie Short, Tulsa's well known airport manager who just got written up in the local press for his collection of 800 autographed photographs of which he is rightfully proud.

At smaller stations such as Muskogee, Paris and Tyler, MCA saves a lot of time. Only one engine is stopped and the total station time is cut to a minute or two.

Houston has become an important

terminal on MCA. Paul Welch is regional traffic manager and he knows his way around town, especially with regard to getting hotel rooms in one of the nation's biggest boom cities.

Northbound from Tulsa on one of the two daily flights, I chose the alternate route via Longview. The crew consisted of Capt. L. C. Waldorf, who's been with MCA for eleven years and who flew with Troop Carrier Command in Europe for four years; 1st Officer O. W. Clark, who flew for TWA one year and who had an excellent war record with the Navy flying night patrol on the Atlantic; and Miss Louise Adams, a comely and efficient little gal who has been with MCA just two months.

Social Center. Longview was one of the two joyful airport surprises on the trip. Here is a county airport serving Longview, Gladewater and Kilgore, all Texas towns, with one of the most attractive terminal buildings you can find anywhere. The airport has become the social center for the county with dances during the summer and all sorts of parties during the winter. Hull-Dobbs runs a very attractive restaurant. Architecturally, the building is ultra-modern with excellent use of glass and indirect lighting.

Northbound from Kansas City to Minneapolis via Omaha and Huron, MCA is an excellent local service. It is obvious that many of the passengers are old hands who use MCA as they used to use the railroad, making frequent trips and some of the trips are on the short side. I had as crew on this segment Capt. G. L. Parent, 1st Officer F. A. Hull and Miss Wilma Hadorn.

Sioux Falls, S. D., was the second airport surprise. An ultra-modern building with excellent indirect and flush lighting, sound-proofed, fine modern quarters for the CAA and Weather Bureau, ample passenger space, ultra-modern furniture and a fine coffee shop with coffee at a nickel a cup, Sioux Falls leaves a wonderful impression on the transient pasenger. Everybody piled out at the airport (we were running a little ahead because of tailwinds) and had coffee.

In contrast, Sioux City, Iowa, and Huron, S. D., certainly are in need of adequate terminal buildings although the landing fields at those points are good. At Watertown, S. D., MCA shuts off one engine to cut down stopping time. At no station was any time wasted except when we ran ahead of schedule.

Everybody Busy. C. H. Calhoun, vice president of maintenance and engineering, and Bill Fobes, regional traffic manager, met me at Minneapolis and I had a look-see at MCA's maintenance and overhaul shops. Last fall MCA took over the Navy's research hangar at the north end of the field and expanded a bit. Even with the new space there's no wastage of room and for the life of me I couldn't visualize how MCA had been able to get along in its original quarters.

Ralph E. Wilson
Directs MCA's Program

Calhoun is in his 20th year in the airline business and is made of genuine stuff—the kind of experience and morale that built the industry. MCA's base reminded me a lot of Delta's base at Atlanta—everybody busy, no wastage of personnel or space, and intimate control of all activity.

Next day I took the local to St. Louis by way of Rochester, Des Moines, Ottumwa and Quincy, passing up Mason City because of weather. The crew was Capt. F. C. DeLosh, who made some of the sweetest landings I've ever experienced; 1st Officer W. W. Thompson, and Miss M. J. Anthony.

MCA's passenger service is good. There is nothing fancy about the meals, sometimes they're hot meals and sometimes they're the soup and sandwich variety, but they are all adequate. Not one person was even slightly discourteous or abrupt with any passenger. The stewardesses tried hard to please at all times. At every ticket office and airport counter there is a clear, neat map of the MCA system.

MCA now has 18 DC-3's, the latest three acquired from Northwest Airlines now going through the maintenance shops at Minneapolis. Calhoun is putting the entire fleet through the fireproofing CAA 04 regulations and is playing a vital role in the 5-Star campaign for on-time dependability. Airline service starts with the airplane. Airplanes delivered to operations on time and in AAA-1 condition rarely meet with any on-line troubles.

MCA has its traffic and scheduling problems. Through passengers are relatively few, but traffic is heavy on such segments as Kansas City-Omaha, Minneapolis-Des Moines-Kansas City, Kan-City-Tulsa, and Tulsa-Houston. On my trips the DC-3 was loaded between some points and light between others. On the average the load factor probably was about 60%.

The MCA system is quite diversified. At the southern end are colorful New Orleans and booming Houston. At the north are agricultural towns in the Dakotas, and the populated and prosperous Twin Cities. From palm trees to snow. In between is the heart of America's breadbasket.

My impression of MCA is that it is a genuine transportation service without fluff or fuss. It is routine throughout in the best sense of the word. So far as I could observe, it has no major or even minor flaws. It's just doing a daily job of transporting people by air over a large and important section of the country—and what more can one ask of an airline?

FINANCIAL

Fuel Costs Shoot Up

Airline hopes began to rise a little as passenger revenues for January and February, reflecting two 10% increases since last spring, moved substantially above those for the same months last year. This month, however, they were confronted with new aviation gasoline and oil contracts embodying price increases which would add millions of dollars to their fuel costs this year, possibly wipe out much of the benefits expected from higher fares.

The fuel price increases, which will affect most though not all of the domestic carriers (some have contracts which won't expire for some months yet), represented a 50% to 55% boost over existing contract prices. It wasn't hard to see what this would mean.

The domestic airlines spent an estimated $34,342,000 for aviation fuels last year, and even if they did no more flying this year than in 1946 their fuel bills would be $15 to $20 millions higher. Actually, though, they probably would fly considerable additional mileage this year, so the fuel price rise might cost them $20 to $25 millions, or more money than the industry ever made in a year.

Eastern Air Lines seemed hardest hit, predicting an increase of $6,158,000 or 110% in this single item on the expense side of its ledgers for 1948. TWA was next with $4 millions, United third with $3,196,000, American fourth with $1,344,744.

Mid-Continent Airlines reports a net loss for January of $42,068 after credit adjustment of $27,700 for possible recovery of income tax from carryback of operating loss to a prior year. Net loss for same month last year was $28,282.

SABENA Belgian Air Lines expects to report a net profit of approximately $500,000 for 1947, as compared to a net of $2,842,964 for 1946 and $119,826 for 1945, first year of operations after a five-year wartime lapse. The more than $2 million drop in earnings last year, as compared to 1946, was held attributable to increased costs due to expansion of services, increases in personnel and acquisition of six DC-4's and three DC-6's.

Labor:

Behncke Views NAL Strike

To give AMERICAN AVIATION readers a complete view of the union side of the current National Airlines pilot strike, the full text of ALPA President David L. Behncke's letter to all ALPA members, dated Feb. 23, 1948, is printed herewith.

Italics appearing in the text are Behncke's.

Dear Member:

Today, the National Airlines pilots' strike is in its 20th day. It was called on Feb. 3. ALPA's Board of Directors and Officers were first written about this crisis on Jan. 29. This letter described the National strikes already in progress before the National pilots' strike was called on Feb. 3, involving nearly all classes of National's employes; i. e., their station employes, clerical workers, and mechanics.

Another letter was written to ALPA's Board of Directors on Feb. 6. This was a thorough coverage letter of 10 pages for use at Local Council meetings to acquaint all members with the details about the National pilots' strike. It described, in minute detail, all the circumstances leading up to the strike as they unfolded on National Airlines.

On Feb. 14, ALPA's Directors were balloted on the question of whether or not a strike benefit, similar to the one paid the TWA and AOA pilots, should be paid to the striking National Airlines pilots. Your chairman, also an ALPA Director, has all this correspondence. He will be glad to make it available for your perusal.

Because the membership objects to long letters, Headquarters has been attempting to outline things more briefly. To begin with, this situation can be described in a single sentence that has come to be almost a classicism in air line phraseology. It is, "Well, you know G. T. Baker." For the edification of the newcomers, National Airlines is owned and operated by G. T. Baker, a young businessman who has had a meteoric rise in the business world by luckily hooking on to the coattails of the upward sweep, overnight development of air line transportation, *and obviously it's gone to his head.*

'Opinionated, Obstreperous'

He is opinionated, obstreperous, and self-centered, and an avowed enemy of all manner of effort on the part of workers to organize and represent themselves. One of the principal stockholders in the company, and reportedly his chief advisor and supporter, is one George Gibbs, Jr. of the Gibbs Shipbuilding Company, reportedly long a hard-bitten, closefisted enemy of any legitimate attempt of his workers to be represented through self-organization. Much more could be said, but when one starts to say it, it quickly gets to be such a long, irksome and involved story that it's usually briefed in the colloquial one sentence, "Well, you know G. T. Baker."

The pilot trouble with Baker dates back to the start of his airline years ago. The National pilots were among the first to become ALPA members. Nothing has ever been accomplished on this airline without a bitter fight. Baker has no regard for his pilots' employment agreement and carries on a continuous campaign of chiseling against its provisions.

Baker's contempt for the grievance-settling machinery in the agreement finally came into glaring focus when a National pilot by the name of Maston O'Neal was fired on Sept. 13, 1945. Since that time, ALPA followed its well-established policy of pursuing every possible avenue of peaceful settlement, going through all the orderly steps over and over again. Baker swashbuckled his way through all this, displaying brashly his usual arrogant and obstructionist attitude, loudly proclaiming that "agreement or no agreement, Mediation Board or no Mediation Board, law or no law, Maston O'Neal (the discharged pilot) would never again work for the company."

The pilots on National were finally compelled to take a strike vote to attempt to force Baker to agree to the appointment of a neutral to settle the O'Neal case. This strike vote, minus a scattered few, carried unanimously and was approved by the National Airlines Pilots' Master Executive Council in accordance with the By-Laws. Headquarters counselled further peaceful efforts to settle the dispute before striking. This was about the time the Military Pilots Association was in its heyday. The no-longer-existing Military Pilots Association had its headquarters in Florida where the bulk of National's operation and headquarters is located.

Boiling Point Reached

Finally, after more efforts, the matter again came to a boiling point, and to make certain that all the National Airlines pilots were still of the same mind about striking, another strike vote was conducted by Headquarters on Mar. 3, 1947, and it again carried, with the exception of a few conscientious objectors, 100% and was again approved by the National Airlines Pilots' Master Executive Council. A strike date was fixed for Nov. 12, 1947. At this time, the National Mediation Board interceded under authority of Section 203 (b) of Title II of the Railway Labor Act, which reads as follows:

"The National Mediation Board may proffer its services in case any labor emergency is found by it to exist at any time."

They called conferences in Washington for Nov. 17, 18, and 19, 1947. Baker put on his usual show of belligerence and inconsistency. Nothing was accomplished. He paraded into the National Mediation Board offices in Washington with a battery of ATA and company lawyers and they wasted everyone's time by making their usual ridiculous, far-fetched, unacceptable proposals. For example, Baker said he would agree to a board of three members appointed by the President of the United States to settle the O'Neal case; nothing less. Other equally ridiculous proposals were made.

The Air Line Pilots' Association representatives said, "We will follow the regular Railway Labor Act procedure," and requested the Board to appoint a neutral referee to sit with the National Airlines Pilots' System Board of Adjustment, hear the O'Neal case, and make the decision, which would be final and binding on all concerned. Baker objected and strutted out of the Mediation Board offices, followed by his string of "yes men" legal advisors, proclaiming loudly, O'Neal is fired and he will stay fired." Actually, a demonstration like this has to be seen to be appreciated.

All sorts of stories have been circulated about Maston O'Neal and the reason he was fired. The latest one I heard was that he was fired for drinking. Another one that is being circulated is he was fired for inefficiency—all untrue—pure Baker inventions. O'Neal is a gentleman of the highest type, a college man, an excellent airline pilot, and a staunch ALPA member.

The story is briefly this: On Sept. 13, 1945, Maston O'Neal became involved in an airline accident that normally, relatively speaking, would be classed as a minor accident. There were no injuries and the cost to the company amounted to approximately $15,000. O'Neal is an excellent pilot. The accident was caused by a wind shift while in a final approach to land on a short runway. O'Neal was abruptly discharged and immediately requested a hearing and the case has gone through all the steps of the grievance procedure in the National Airlines Pilots' Employment Agreement.

The company made a farce of all the hearings and G. T. Baker was very much in evidence. He passed in and out of the hearings in a most flippant and insincere manner boasting, as usual, "Agreement or no agreement, hearings or no hearings, Maston O'Neal will never again work for National."

It is common knowledge that Baker has a personal dislike for O'Neal. What this dislike arises from is not definitely known, but apparently it stems from two sources: one, because Maston O'Neal had the intestinal fortitude to testify against the company and for ALPA at certain CAB accident hearings about the company's maintenance and operating practices at a time when National was having an epidemic of crashes. According to reports, a more important reason seems to be that O'Neal and Baker unfortunately clashed in certain of their social activities around Miami.

Going back again to the train of events leading up to the National strike, on Nov. 26, 1947, the Association sent the National Mediation Board a wire which follows:

"ON NOVEMBER 19 WE ASKED FOR A SUSPENSION OF MEDIATION IN THE MASTON O'NEAL CASE FOR A FEW DAYS UNTIL OUR EXECUTIVE BOARD MEETING, THE DATE OF WHICH IS ESTABLISHED IN OUR BY-LAWS, COULD BE HELD. YESTERDAY THIS MEETING ENDED AND WE ARE NOW READY TO RESUME MEDIATION AT ANY TIME THAT MAY BE CONVENIENT TO THE BOARD. IN VIEW OF THANKSGIVING BEING FOLLOWED BY A WEEKEND I SUGGEST THAT WE RESUME MEDIATION IN THE O'NEAL CASE NEXT WEEK. PLEASE WIRE COLLECT."

Because of Baker's attitude, the Mediation Board was able to do nothing, and finally on Feb. 3, 1948, another strike date was set. The Mediation Board was notified, the Post Office Department, and Baker. This time, the strike took place as scheduled. It started off 100% with the exception of five ALPA members; namely, W. A. Fordyce, Joseph Bailey, L. J. Royall, M. C. Wedge, and C. T. Stettner, who were check pilots and other junior officials of the company. Their first act was the ferrying of strike-grounded National airplanes. Until this group of five joined with Baker to ferry airplanes, the strike had National's equipment 100% on the ground and the strike would, without any question whatsoever, have been settled within 48 hours.

In the interim, the Mediation Board, on Feb. 5, had called company and Association representatives to Washington on Feb. 7 for a tri-party conference to settle the strike by appointing a neutral referee to sit with the National Airlines Pilots' System Board of Adjustment to hear and settle the O'Neal case and to place the problems of the other striking National employes into arbitration.

In the interim, the above-named pilots,

Fordyce, Bailey, Royall, Wedge, and Stettner, had ferried airplanes and given Baker the spark of hope he needed to inflate his ego sufficiently to try to operate. The upshot was that Baker failed to show up in Washington at the National Mediation Board's Feb. 7 conference, called to settle the strike. He sent his messenger-boy lawyers instead. They meekly stated that Baker had withdrawn his offer, which we learned later was sufficiently satisfactory to have resulted in a settlement of the strike.

Let the pages of ALPA history show unmistakably clear that had it not been for the loathsome actions of Fordyce, Bailey, Royall, Wedge, and Stettner, all ALPA members (former), the National strike would have been settled on Feb. 7 in Washington at the offices of the National Mediation Board. There are many that will bear witness to this fact.

Thusly encouraged, Baker began at once to canvass the country for the usual straggling non-Association pilots, the caliber of whom is too well-known to everyone to waste time describing here. We understand he managed to recruit about 50. Something like 30 are reported in training and he has operated a few schedules and will, no doubt, attempt to operate more.

The ones doing the training and who operated the first token schedules are W. A. Fordyce, Joseph Bailey, L. J. Royall, M. C. Wedge, C. T. Stettner, R. A. Davis, T. G. Alderson, and J. R. Orr. There is also one Jean Model in Baker's division, a conspicuously wealthy playboy pilot for whom the Association went to bat during the war and saved his job. Fordyce failed in his upgrading to first pilot and was slated for Baker's ax. Little old ALPA made the fight and saved his job. Obviously, this is their way of showing their appreciation. Are there others of this stripe in ALPA? We are all too soft.

As the situation now stands, it's a cold, hard strike and, no doubt, will carry on for quite a period. Baker has been without income for 20 days and with a vigorous picketing, all-out campaign against him by the Association, all its members, and the National pilots, he will not be able to resist complying with his agreement and the Railway Labor Act very long.

No matter how people feel about unions, associations, and strikes, they are not going to take very many chances riding around the country on an airline where an airline pilots' strike is in progress. The thing all airline pilots must do at once is let the people of our country know what the situation is on National and what it amounts to. If they are not told, how will they know about the strike? It isn't difficult to start a "have you heard" conversation with people who use the airlines, and pass out leaflets telling the story.

It is much more difficult to prosecute a strike now than it was before the enactment of the Taft-Hartley Act. In some states, it's a nightmare—a maze of law against labor. Florida is one of such states. Injunctions against labor are easy to obtain. It's practically impossible to do anything without getting into law suits. It is really something.

Currently-in-office reactionary legislators have, in a large sense, even taken away the right of free speech. They have, in their frenzy to outdo one another, tied labor hand and foot. By the time a representing organization wades through all the federal laws, it's already a plenty big job, and then it gets to be a matter of state laws and all the state labor harassing measures that have been put through. For example, Baker, relatively speaking, has a small airline, but even so he operates through 12 states, all of which have different laws. Put these alongside the federal laws and that's the picture.

We have the situation fairly well in hand on National in Florida with a good local lawyer working on the strike exclusively, and the legal angles are well under way. He is standing by with a habeas corpus for anyone put in jail. It appears Baker has "suititis" and files a suit every time he turns around, takes out injunctions right and left. The purpose is threefold—publicity, harassment, and to scare the striking pilots, who, incidentally, are standing 100% fast and together. They are a seasoned group and

David L. Behncke

"It's a cold, hard strike."

accustomed to lots of abuse. The type of people who don't scare easily.

There is one point about this strike which should be made clear: It is not a sympathy strike. ALPA doesn't carry on sympathy strikes. The only way ALPA would engage in a sympathy strike would be by prior agreement with other labor representing organizations, which agreements we don't have. The National strike was scheduled to be called some time during February and there was no better time to call it than while all the other National strikes were on, rather than continue to fly, and walk through several picket lines every time a pilot had to get to a National plane to take out a schedule.

When it's all said and done, the fact remains that the National Airlines pilots were actually flying under an officially declared truce ever since Nov. 12, 1947, when they agreed, at the request of the National Mediation Board, not to strike at that time to give the Board a chance to settle the dispute. Anyway, the National pilots were becoming increasingly apprehensive about the equipment with the regular mechanics out, and had reached the end of their rope. The striking National ground employes were willing at any time to arbitrate their differences with Baker. He refused.

The National Airlines pilots' strike is fully authorized and in accordance with every conceivable ALPA By-Law, federal law, and even has the sanction of ALPA's Executive Board, which, at its last meeting, passed the following resolution:

"RESOLVED THAT the members of the National Airlines MEC shall, to the best of their ability and with Headquarters' advice and assistance, attempt to settle this grievance (the Maston O'Neal case) through all the proper steps as now outlined in their agreement.

"BE IT FURTHER RESOLVED THAT if all above suggested efforts are not sufficient to carry this to completion as written under the Railway Labor Act, the National Airlines pilots be supported in a strike action to protect their grievance rights and so as to prevent a precedent to be arrived at by the Company which would subsequently be reflected in other cases in the industry."

The last paragraph is highly significant.

So far as every effort to settle the dispute is concerned, none has been overlooked. These efforts extended over 2 years and 4½ months, since Sept. 13, 1945, when Maston O'Neal was fired. Again it becomes a matter of "Well, you know G. T. Baker." The National pilots are a long embattled group that knows how to fight. They know hardship; they know how to work under pressure in a situation like this; but they, nevertheless, must be supported, backed-up, and helped.

The strike benefit vote of ALPA's Board of Directors, mailed from Headquarters on Feb. 14, 1948, has resulted in supporting them with the same kind of monthly strike benefits as were paid to the TWA and AOA pilots, namely, $215 for co-pilots, $350 for reserve pilots, and $500 for first pilots. The National pilots have a tough battle on their hands and again it's a battle for all airline pilots.

The highlight reason for this is if Baker, who has always been in the forefront with the ATA, and which organization is now backing him strongly, gets away with disregarding the grievance provisions in his pilots' employment agreement and violating all the laws governing the pilot-company relations in the airline industry, all the other airline pilots may as well relegate their agreements to the waste basket. We must not lag with our assessments. They must be paid promptly.

Enclosed is a National pilots' strike support benefit card for the first strike assessment for the National pilots. The amounts are relatively small, because of the lesser number of National pilots. Don't lay your assessment card aside. Write a check for the proper amount and send it in immediately in the enclosed envelope, together with the card. The overall number of National strikers is only slightly over 100. I think 112 is the actual count. There may be a few added pilot officials who refused to fly.

In war, an army can't march on an empty stomach and that's what a strike is—it's war—economic warfare. In war, there is, too, the morale factor. Very important! Therefore, let it not be said that an ALPA member lagged on his National strike assessments or any other assignment to assist the National pilots.

Briefed, here are the cold, hard facts about this strike: To begin with, the showdown with Baker had to come sooner or later. That is a certainty. The Association had been fighting it off for more than three years because we don't want strikes; we don't like them. I repeat, we fought to avoid this one for years.

The extra work it takes to carry on and win a strike is a killer. But the time comes in every representing organization after everything else fails when it is a matter, on the one hand, of chin-up fighting or, on the other, pleading and taking whatever the opposition chooses to hand out, and what Baker would choose to hand out—well, what do you think? Who is in back of Baker? The ATA and his shipbuilding friend, Gibbs, Jr.

According to reports, the other carriers are giving Baker the Jack Frye lip service—"Stay in there and pitch, my friend; you

(See BEHNCKE, page 46)

LABOR

NAL Flies Despite Strike

For an airline afflicted simultaneously by two forms of adversity—a pilots' strike and an abnormal slump in its highly seasonal business—National Airlines last week wasn't doing too badly. It had succeeded in restoring some service on all its routes, using non-union pilots, and it was being awarded a temporary mail rate involving a lump sum payment of over half a million dollars.

The Civil Aeronautics Board's action on NAL's petition for a temporary mail pay rate was strongly opposed by David L. Behncke, president of the Air Line Pilots Association, who declared that it was equivalent to "having the United States Government use its funds to finance the strike-breaking activities of National Airlines, Inc., a thing unheard-of in the annals of labor history in this country."

CAB read Behncke's bill of objections to its show-cause order and then dismissed his application to intervene in National's mail rate case. Similarly denied was a motion to intervene filed by the International Association of Machinists (CIO), representing the mechanics, maintenance employes, station personnel and clerks of the airline.

At a pro forma hearing before CAB Examiner Ralph L. Wiser last week, National accepted the proposed temporary mail rate, made applicable to the airline's operations since last July 14, a date marking the beginning of the decline of revenues which by midwinter had put the carrier in a "critical" financial condition.

The carrier's standard rate of 60c per ton mile was retained, but added to it was a base mileage figure of 28,000 miles, plus minimum capacity factors or "false" mail loads. For the period July 14, 1947, through Dec. 31, 1947, CAB awarded National a lump sum of $545,000, equal to the product of the 60c rate and a minimum capacity factor of 450 pounds on the designated mail schedules flown during the period. For the entire year of 1948 a minimum capacity of 350 pounds would apply, and on and after Jan. 1, 1949, the factor would drop to 250 pounds. Adjustment formulas were provided to take care of fluctuations in mileage.

Meanwhile, National was moving steadily toward its goal of restoration of normal operations, despite the pilot strike. By Mar. 1 it had become able to announce that all its pilot vacancies had been filled and check-out procedures were progressing satisfactorily. Miami-Washington-Newark flights had been operating for several days at 100% revenue load factors, and all was in readiness for resuming service between New York and Havana, via Washington.

National on Mar. 4 filed notice of a $5,000,000 libel suit against the International Association of Machinists, alleging that an article appeared in the union publication charging that the company's planes were unsafe. The airline has taken a second step in its $5,000,000 libel suit against the Air Line Pilots Association, filing with the court a statement of charges and supporting facts. A similar step has been taken in the $750,000 suit against IAM mechanics, alleging breach of contract.

DC-6's Fly Again— Nationwide resumption of service by the modified Douglas DC-6 was scheduled to get under way Mar. 15 as American Airlines resumed coast-to-coast flights with the big transports. United Air Lines plans resumption of DC-6 service on its San Francisco-Honolulu run March 21 and over its transcontinental route April 1. National Airlines is scheduled to start its Miami-New York DC-6 service Mar. 25 and Braniff International Airways will announce early in April resumption of DC-6 flights over its Chicago-Houston route. Ninety-seven of the planes were grounded by airline operators last November following crash of one DC-6 and an emergency landing of another.

TWA, Navigators Arbitrate

Trans World Airline, which suffered a costly pilots' strike 16 months ago, was threatened last month with another strike—this time on the part of its navigators—but the strike action was averted when TWA management and its 65 navigators who are members of the Transport Workers Union of America (CIO) agreed to submit to arbitration issues pertaining to wages and vacation pay, last issues in dispute.

Previously, agreement had been reached on such issues as grievance procedures, participation in company retirement plans, provision for families of navigators who might be stranded in foreign countries, representation in hearings involving accidents and sick leave benefits.

TWU named Maurice H. Forge, international vice president of its Airline Division, as its representative on the arbitration board, and TWA chose W. K. Jacks, director of operations of its International Division. Arbitration would begin shortly after these two had agreed on a neutral third member.

Join Railway Brotherhood

Two groups of aviation employes named the Brotherhood of Railway Clerks as their bargaining agents last week.

Employes of the Airlines National Terminal Service Corp. at Willow Run, Detroit, and at Cincinnati voted more than 5-to-1 for Brotherhood representation. There were 370 clerical and station employes involved in the election. Similarly, employes of Air Cargo, Inc.—subsidiary of Air Transport Association—designated BRC as their bargaining agent, with a 6-to-1 majority among 46 eligible employes.

It was reported that BRC is now pressing an organization campaign among clerks of TWA.

NEW ROUTES

PAA's Domestic Fight

Pan American Airways was recommended for a single domestic route between New York and Miami, via Philadelphia, Baltimore, and Washington, in the report of CAB Examiner William J. Madden issued Feb. 27.

Pan American had applied for routes extending from such East Coast gateway cities as Boston, New York, Philadelphia, Baltimore and Washington to Miami, to New Orleans and to the West Coast, and from the inland gateway cities of Detroit and Chicago to all its coastal gateways.

Viewing the Miami-New York segment as the only one over which significant "new" service could be provided by PAA, and the only one which carried any large proportion of international passengers, Examiner Madden saw no objection to granting this route to Pan American but thought it advisable to deny all its other proposals on the primary ground that they would largely parallel and duplicate existing domestic air services with which they might prove dangerously competitive. PAA's application has been opposed by 12 domestic airlines.

Madden found it paradoxical that no single-carrier service from New York to South America was available on any U. S. flag airline, while two foreign carriers, Linea Aeropostal Venezolana and

Peruvian International Airways, were offering such a service. He thought the international traffic between New York and Miami had attained such proportions as to "raise a serious question as to the propriety of longer withholding from such travelers the advantages of using one carrier for the entire journey."

While recognizing that this authorization to Pan American would divert traffic from National and Eastern, the examiner said "there is a point beyond which (such) protestations of diversion . . . cannot be given controlling weight, and it appears that this point has been reached."

As to PAA's proposals for other domestic routes Madden concluded such awards would not be warranted by either traffic or service considerations. It is unlikely, he said, that Pan American could offer any significant new service over these routes which presently certificated carriers could not offer, and on the other hand for PAA to be allowed to operate duplicating services would pose the danger of a dangerous amount of diversion from the domestic carriers now operating over these routes. PAA's estimates of the domestic traffic potential were "over-optimistic," he said.

Continental Air Lines has been authorized to serve Lawton-Fort Sill, Okla., at Route 29 intermediate between Wichita Falls, Tex., and Oklahoma City, Okla., for three-year period until Feb. 28, 1951. Proceeding was based on application of City of Lawton, and received support of Second Assistant Postmaster General and Secretary of War.

Pan American Airways has been authorized to serve Delhi, India, as intermediate between Karachi, Pakistan, and Calcutta, India, using Palam Airport.

Pan American Airways has asked CAB to amend its Latin American certificate to create new 2,530-mile route between Guatemala City and co-terminals Los Angeles and San Francisco. PAA pointed out that there is now no one-carrier U. S. or foreign flag service from West Coast points to Guatemala and points south.

British Caribbean Airways, Ltd., has applied to CAB for foreign permit authorizing service between Kingston, Jamaica, and Miami.

RATES & TARIFFS

European Fares to Rise

Passenger fares of airline members of the International Air Transport Association conference will rise slightly in Europe during coming six months, subject to government approval, because of mounting costs of operations, but they will be reduced in the Middle East region. European freight rates will hold at present levels.

IATA traffic conference No. 2 recently ended a two-week meeting at Cairo, during which time it completed the international airline rate structure covering services of 34 airlines of Europe, Africa, and Middle East.

More summer schedules were agreed upon, particularly from European points to Egypt, Palestine, Syria, Lebanon, and Turkey. Thirteen different companies will operate an unprecedented number of 80 schedules weekly both ways between Europe and Cairo.

CAB Critical of NEA

Northeast Airlines on Feb. 27 received a lump sum mail pay award totaling $2,107,578 (covering the period May 1, 1945, to April 30, 1947), along with criticism for failure "to establish more effective control over maintenance costs."

The award was equivalent to a rate of 29.36c per revenue plane mile flown in scheduled service during the period. Northeast had asked 30.03c and 42.05c, respectively, for each revenue plane mile flown during the first and second years of the period.

CAB made a substantial cut in Northeast's DC-3 maintenance costs, which it held to be unreasonably high in comparison with the average per-hour maintenance costs reported by eight somewhat similar carriers. Figure submitted by Northeast was $41.34 per hour flown, but CAB allowed it a maximum of $32.75 in figuring the rate base, noting that this was still 30% above the average figure of other comparable carriers.

Also disallowed as not contributing to the air transport operations for which the mail rate was established was an item of $25,722 expenses incurred in connection with NEA's unsuccessful attempt to work out a merger with Capital Airlines. Basis of depreciation on NEA's DC-4's was changed from three to four years.

Higher Rate for Caribbean

Caribbean-Atlantic Airlines won an upward revision of its base mail pay rate on Feb. 27 but along with it drew

Constitution's Upper Deck—Luxurious seats for 92 passengers have been installed "topside" in the U. S. Navy's huge Lockheed Constitution, and there's room for almost that many more people on the lower deck of the 92-ton aircraft. Aft spiral staircase connecting the plane's two decks is in the center of the picture with the forward stairway at the end of the aisle. Recessed lighting system gives increased cabin illumination. Outlets on ceiling are for air conditioning and loudspeakers with which pilot can make announcements to passengers. Seats are blue, the carpeting rose and walls light gray. This is the first picture released of the Constitution's passenger compartment. The transport has been flying since Nov. 7, 1946, and has been aloft more than 140 hours in 70 flight tests.

Wing Tunnels—The Constitution's wings are so large that tunnels have been provided to permit engine and accessory maintenance during flight. A chief petty officer in one of the tunnels opens the door into the fuselage section. By stooping, a mechanic can walk as far out the wing as the outboard nacelle but must crawl on hands and knees beyond that.

from CAB an admonition that it should reduce its operating fleet three DC-3's to two and cut personel proportionately.

Effect of this revision is to give Caribbean a new base rate of 46c per airplane mile, payable, under a sliding scale, at a passenger load factor of 50% and declining to a minimum of 13c at 76% load factor. This amounted to a 2c increase over the base mail pay rate awarded in late January and made applicable to CAA's operations since last Nov. 1. The revision, based on exceptions filed by the carrier, took cognizance of increases in gasoline prices and in future advertising costs.

Overruled was an exception taken by Caribbean to the 7% rate of return on recognized investment allowed in the Board's original decision.

United Air Lines has filed with CAB a supplement air freight tariff reducing by approximately 35% its rates applying to carriage of certain commodities from Los Angeles to Fort Wayne and from San Francisco, Oakland and Fresno to Cleveland, Fort Wayne, Philadelphia.

Pan American Airways' proposal to provide lower fares for certain nonstop services than for the same services operated via intermediate points has become the subject of a CAB investigation aimed at determining whether such a "double standard" of fares is "unjustly discriminatory, or unduly preferential or unduly prejudicial." Fares in question would apply between Miami and San Juan and between Miami and St. Thomas, V. I.

A joint rate of $345 one way and $621 round-trip between New York and Paris, via London, was established on Mar. 3 by **Pan American Airways** and **British European Airways.**

Southwest Airways this week effectuated a joint arrangement with **Pan American Airways** whereby passengers may fly to Honolulu from any city on Southwest's system for the established PAA San Francisco-Honolulu or Los Angeles-Honolulu fare of $150.

POSTAL SERVICES

Roof-Top Mail Service

Rooftop operation now is being planned by Los Angeles Airways as the next development in its helicopter air mail experiment in the Los Angeles area.

With the inauguration of service over Segment C in January Los Angeles Airways has all its routes in operation, flying 750 miles a day and making 115 daily heliport landings and take-offs over three suburban routes and one shuttle between Los Angeles Airport and the downtown Terminal Annex post office.

The shuttle flights land upon the ample rooftop of the Terminal Annex post office, but the helicopters have made no attempt to use the rooftops of the smaller post office buildings located in the suburban route towns. Now, however, in the interest both of speed and economy, Clarence Belinn, president of Los Angeles Airways, and his operations personnel are sketching plans to switch from the ground heliports to the post office rooftops where the flying areas are clear. Rooftop operations will save both the time lost and the expense involved in transporting the mail to and from the heliports by messenger.

Long Beach or San Pedro probably will be the first location for rooftop operation.

According to Belinn, preparation of the suburban post office rooftops as nests for the helicopters presents a relatively simple problem. All that needs to be done is build a platform approximately 50 ft. square, with a stairway leading to it, and it will be quite sufficient for the helicopter pilots to land and take-off, providing there are no nearby obstacles in the flight path.

Los Angeles Airways also is beginning to map its plans for night operations and probably will start on this phase of the experiment by May or June. At the present time, the helicopters are chiefly effective in speeding up the delivery of incoming mail, as operations are mainly in the morning hours and timed to catch carriers making deliveries. Night operations will reverse the process and will be timed to the pick-up of outgoing mail to catch departing trunk line planes.

Belinn expects night operations will require additional equipment. LAA is operating its three circular suburban routes—two trips daily—and six shuttle trips with four Sikorsky S-51's, using three ships on the daily schedules and having one constantly in overhaul for reserve. Whether one or two additional craft will be needed probably will depend upon the pattern of the night schedules.

The company flew 37,073 miles and carried 209,097 pounds of mail in its first three months of operation, showing steady gains.

Overseas Air Parcel Post

Post Office Dept. is starting international air parcel post to service 21 countries on Mar. 15, as follows:

Austria, Belgian Congo, Bermuda, Czechoslovakia, Denmark, Egypt, Ireland, Finland, Gold Coast, Great Britain, and Northern Ireland, Greece, Iceland, Italy, Netherlands, Newfoundland, Norway, Sweden, Switzerland, Tunisia, Turkey, and Union of South Africa.

CAB CALENDAR

Mar. 15—Hearing in Intra-Territorial Service in Hawaii Case. (Docket 2390 et al.) 10 a. m., Hawaiian Standard Time. Federal Court Room, Federal Building, Honolulu, T. H. Assistant Chief Examiner Thomas L. Wrenn.

Apr. 5—Hearing on application of Aerovias Nacionales de Colombia, S. A., for a Bogota-New York Foreign Air Carrier Permit. (Docket 3249). Examiner Barron Fredricks.

June 14—Hearing in Pennsylvania-Central Airlines Mail Rate Case. (Docket 484). Tentative.

TWA Club Hears Parrish

Wayne W. Parrish, editor and publisher of AMERICAN AVIATION PUBLICATIONS, was guest speaker at a meeting of 260 members of the TWA Management Club in Kansas City, Mo., on Feb. 19.

Aviation Calendar

Mar. 19—IAS National Flight Propulsion meeting, Hotel Carter, Cleveland.

Mar. 30-Apr. 1—Annual ATA Engineering and Maintenance Conference, Continental Hotel, Kansas City.

Apr. 4-8—Nineteenth annual convention American Association of Airport Executives and second annual showing of American Airport Exposition, Congress Hotel, Chicago.

Apr. 12-13—AIA Technical Committees annual meeting, Hotel Statler, Washington.

Apr. 13-15—California State Aviation Conference, Ambassador Hotel, Los Angeles. (Postponed from Mar. 18-19).

Apr. 17-24—Northwest Aviation Exposition, Minneapolis auditorium.

Apr. 22-23—Personal Aircraft Council, AIA, meeting in Dallas.

Apr. 22-24—American Helicopter Society Fourth Annual Forum, Philadelphia.

Apr. 24—Dedication of Skyways I and II and dedication of CAA Aeronautical Center at Oklahoma City.

May 12-15—Aviation Writers Association national convention, Commodore Hotel, New York.

May 18-20—Aircraft Industries Association directors meet, Williamsburg, Va.

June 8-10—Airport Management Conference, Texas A&M College, College Station. (Dean Howard W. Barlow in charge). (Formerly scheduled for June 15-17).

June 14-15—Airlines Medical Directors Association annual meeting, Royal York Hotel, Toronto, Canada.

June 16-18—Aero Medical Association 19th annual meeting, Royal York Hotel, Toronto, Canada.

June 21-25—American Institute of Electrical Engineers summer meeting, Mexico City.

June 22-23—Annual Ohio State Aviation Clinic, Bowling Green State U., Bowling Green.

June 20-July 11—National Soaring Contest, Elmira, N. Y.

July 16-24—1948 Road Show, ARBA, including airport construction equipment, Soldier Field, Chicago.

July 31-Aug. 8—International Air Exposition (New York's golden jubilee), New York International Airport.

Sept. 4-6—National Air Races, Cleveland.

International

Mar. 30—ICAO Personnel Licensing Division, Montreal.

Apr. 20—ICAO Rules of the Air and Air Traffic Control Division, Montreal.

May 4—ICAO North Atlantic Regional Meeting, Paris.

May 17—ICAO Facilitation Division, Geneva.

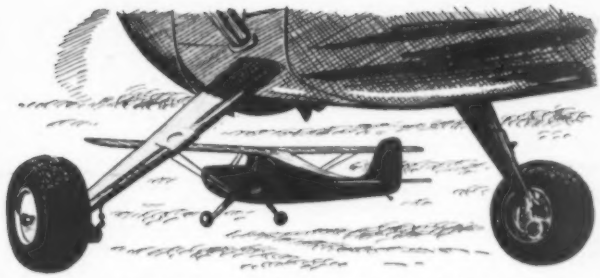
May 20—ICAO European-Mediterranean Regional Meeting, Paris.

June 1—Opening of Second ICAO Assembly, Palais des Nations, Geneva. (About 3 weeks).

July 13—ICAO North Pacific Regional Meeting, Honolulu or Vancouver.

Standard of California's

PLANE FAX



A page of service tips for private flyers and fixed-base operators

High oil consumption indicates cylinder wear

The most difficult place to lubricate in aircraft engines is the upper ring travel. That's because ordinary oils "run away" from these hot spots, expose them to excessive wear. You can judge the amount of wear in this area of your engine by its rate of oil consumption, for increasing consumption indicates worn rings. RPM Aviation Oil is compounded to stick to the hottest parts of engines, reduce ring and cylinder wear.

Vapor lock possible when at high altitudes

Since each thousand feet of altitude lowers the boiling point of gasoline two degrees, light fractions which should be well behaved on the ground can cause vapor bubbles in fuel lines or carburetor. To prevent this situation, Chevron Aviation Gasoline is blended with a careful selection of hydro-carbons to make sure it's perfectly balanced to give easy starting on the ground, dependable protection from vapor lock aloft.

Aviation accessories available on Credit Cards

With everything from aircraft tires and tubes to flashlights and plastic cleaner in the nationally famous Atlas line of tires, batteries and accessories, Standard Airport Dealers now offer flyers complete one-stop service. For cross-country flyers the availability of these top-quality aviation supplies is a convenience as Atlas Aviation supplies may be purchased at airports all over the West on Chevron National Credit Cards.

Use a Chevron National Credit Card

If you reside in the West, write Standard of California, 225 Bush Street, Room 1618, San Francisco 20, California, or ask the Standard Airport Dealer at your field for an application blank. Chevron National Credit Cards are good at airports throughout the United States, Canada and Alaska.

"Play Safe—File a Flight Plan"

CHEVRON AVIATION GASOLINE

RPM AVIATION OIL

Standard Oil Company of California

PERSONNEL

ADMINISTRATIVE

Thomas Wolfe, vice president in charge of the Pacific-Alaska Division of Pan American Airways, will leave the company April 1 to establish his own business. Wolfe has been in aviation for 23 years and served with United and later with Western before joining PAA in 1946.

Leo H. Dwerlkotte has resigned as executive vice president and director of Western Air Lines but will continue to serve as consultant to the company on its pending mail rate application and other financial matters.

Ansom C. McKim, who has been Trans-Canada Air Lines' vice president-administration service since last july, has been appointed vice president-traffic for the company. In addition to handling the expanding traffic department, he will represent the company in ICAO and IATA matters.

Joseph F. Grant has been promoted by Slick Airways from assistant legal advisor to secretary.

Holland E. Meacham has been appointed personnel director of Slick Airways, handling employe relations, supervising training and industrial relations programs.

William A. Brechtel has been named to head California Eastern Airways' new foreign service division. He was cargo manager for Matson Navigation Co.'s air transport division before joining Cal Eastern's sales staff last July.

OPERATIONS-MAINTENANCE

Richard V. Porterfield has been named flight service superintendent of Pan American Airways' Latin American Division, succeeding the late **John B. Leypoldt. Porterfield** has been serving as assistant to the district traffic manager in charge of personnel.

Ansom C. McKim
V. P.-Traffic for TCA

Joseph Foulkes has resigned his post as assistant to the communications superintendent for Pan American's Alaska Division to become general manager of the Siamese affiliate of Aeronautical Radio, Inc., serving the Bangkok area.

Del G. Hendrickson, superintendent of operations for Empire Air Lines since May, 1946, is leaving the company late this month. He is an old-timer in aviation, having served formerly with Eastern, TWA, Pacific Northern and the CAA.

Henry Hyde has been named United Air Lines station manager at Long Beach, succeeding **R. C. Moeser**, who has been named station service manager at Los Angeles. **George Grogan**, formerly flight dispatch manager at Chicago, has succeeded Hyde as station manager at Monterey.

S. P. Parker, formerly UAL station manager at Detroit, has been moved to Philadelphia in the same capacity.

Robert M. Clem, for the past two years city sales manager for Southwest Airways at Oakland, Calif., has been named assistant station manager at Guam for Transocean Airways.

Ernest M. Weiss, veteran of 19 years with United Air Lines, has been named superintendent of technical ground services, with offices in Denver. **Robert A. Graham** has been appointed superintendent of ground training.

R. S. "Sid" Edwards, formerly UAL station manager at Chicago, has been transferred to Des Moines, succeeding **S. M. Hadden**, who went to the operations department of LAMSA in Mexico City.

George Brown, who has served in 11 different posts since joining Pan American in 1940, has been appointed station manager at La Guaira, Venezuela.

L. N. LaPointe was named San Francisco plant maintenance manager for United, and **N. D. Boratynski**, who has been resident engineer in charge of construction of UAL's maintenance base there, has become acting regional design, buildings and airports manager.

C. L. "Cy" Palmer has been named UAL station manager at Twin Falls-Gooding, succeeding **Jerry Manson**, who was acting station manager.

George G. Cain, formerly manager of stewardess service for Western Air Lines at Los Angeles, has been named station manager at Long Beach.

Roy B. Whitney has resigned his position as director of passenger service for Chicago and Southern Air Lines to handle his family's affairs in South Carolina. He had been with C & S since 1940.

Gaston Jacques Zimmerman, a French chef of almost 50 years experience, has been appointed food production manager for TWA, with offices in Kansas City.

Francis B. Chalifoux, formerly a first pilot with American Overseas Airlines, has been named director of operations for the Iceland Airport Corp., operators of Keflavik Airport, succeeding **Thomas E. Collins**, who returned to the U. S. to accept a permanent Air Force commission.

Miss K. B. (Barney) Lalor, first Australian hostess to fly on the trans-Pacific route, has been appointed superintendent of hostesses for British Commonwealth Pacific Air Lines.

TRAFFIC & SALES

Carroll F. Little, Jr., former traffic representative for Braniff Airways in Kansas City, has been named district traffic manager in Wichita, succeeding **Charles Gray**, who was transferred to Oklahoma City in same capacity.

Don V. Churchward, formerly traffic representative for Northwest Airlines at Detroit, has been named to fill the newly-created position of office manager in Shanghai.

R. M. Rex has been named chief cargo agents for American Airlines at Los Angeles, replacing **Mansfield Williams**, who resigned to enter private business.

Schuyler Dunning has been appointed Hollywood sales manager for American Airlines, and **Billy Sully** has been named Beverly Hills sales manager.

Richard V. Porterfield
PAA Flight Service Sup't.

Leonard Kimball, former director of public relations for TWA, has joined the sales force of The Flying Tiger Line, with headquarters at Lockheed Air Terminal, Burbank. **Mayo Thomas**, who was with the Flying Tigers in their organizational days and later went with Santa Fe Skyways, Inc., in the capacity of general agent, has returned to the Tigers as division freight agent at Burbank.

Eugene John Perry, former station traffic manager for Pan American at San Juan, has been named San Juan sales manager. **Frank Ostrander**, formerly district sales manager at Panama, has succeeded Perry as station traffic manager. **Julis Mijares** succeeds Ostrander as sales manager in Panama.

Philip Seifert has been transferred from district traffic manager for PAA at San Juan to the same post at Port-of-Spain, Trinidad, succeeding **John Snow**, who goes to the Atlantic Division for assignment in the European sector.

Kenneth C. Gunter, who recently resigned as advertising manager of PAA, has formed his own advertising agency, with offices at 299 Madison Ave., New York City.

Roberto Carrasquillo, formerly with Puerto Rico Housing Authority, has been appointed traffic and sales representative for Eastern Air Lines at San Juan.

Joseph G. Brown, agency sales agent for EAL in the New York reservations office for the past year, has been appointed agency representative in the N. Y. area.

Walter A. Johanson, agency and tour manager for Scandinavian Airlines System in New York since company began operations to this country, has been appointed district traffic manager for SAS in Chicago.

Alvin E. Levenson, formerly with U. S. Airlines, Inc., and Air Cargo Transport Corp., has joined the cargo sales staff of KLM Royal Dutch Airlines in New York.

Donald E. Derrah, formerly assistant district traffic manager for Northwest Airlines at Milwaukee, has become assistant d.t.m. at Cleveland.

Gerald J. de Ainza has been named district agency manager in San Francisco for American Airlines, succeeding Charles S. Robbins.

Don A. Huff has been appointed director of passenger and cargo sales of Peruvian International Airways. He was formerly director of cargo sales, and his new appointment marks consolidation of passenger and cargo sales into a single department. Huff was with Braniff Airways before joining PIA.

C. E. Holloway has been designated New York district manager, cargo sales, for Trans-Canada Air Lines with offices at 16 East 58th St. He was formerly with Eastern Air Lines and Air Express International Agency, Inc.

Airline Commentary

By ERIC BRAMLEY

PAN AMERICAN Airways has the idea that when the Wright Brothers' airplane is returned to this country, it should come by air . . . And naturally PAA, being an enterprising outfit, wants to be the line to carry it . . . So one of PAA's London representatives called up the British gentleman in charge and explained that PAA would like to fly the Wright plane to the U. S. . . . He was stopped cold when the question came back: "Oh, do you think you can get a pilot to chance it?" . . . We hardly think the Wright plane has the range for the flight . . .

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The Post Office Dept. has been sticking the old needle into some of the airlines . . . It appears that an envelope company contacted 17 of the airlines and discovered that only 11 of the 17 used air mail at all . . . This intelligence found its way to the Post Office, and Bob Burgess, Deputy Second Assistant, sat down and penned the airlines a little note . . . He pointed out that PO records show that the average piece of air mail returned 3.9c to the airlines, so they can't afford not to use it . . . Come on, boys let's start putting wings on those letters . . .

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One of the well-known attorneys in this aviation business passes on an interesting little bit of information . . . He says that he recently bought for his library a well-known series of volumes called *American Jurisprudence* . . . And he was interested to note that the topics discussed in volume six started with "aviation" and ended with "bankruptcy" . . . Darned undiplomatic publishers, we say . . .

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We were on hand the evening of Feb. 25 to see National Airlines' first flight come into Washington, just five days after the company received certification from the Civil Aeronautics Board . . . And we were treated to quite a sight . . . When the DC-4 was approaching the ramp the agent signalled the pilot to swing around too far . . . Consequently, on departure the plane couldn't get out without hitting another plane . . . Inasmuch as National didn't yet have a tractor with which the plane could be towed backward, thus making a turn possible, it looked as though things were slightly snafu . . . But, lo and behold, one assistant to the president, one assistant operations manager, one station manager, one lawyer and two agents took hold of the wheels and pushed that big iron bird backward . . . We didn't think it was possible, but we saw it . . . That's what we call putting your shoulder to the wheel . . .

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Sir William Hildred, director general of the International Air Transport Association, has been quoted in this column before, and we now want to quote him again, because we believe he has a knack of saying things so that they stick . . . This is on reliability of airline service: "I make one plea for reliability. Once the public trusts a given airline's word, that airline is on the road to success. Keep faith with the customer" . . . Better read that one a couple of times . . . It's another quote that could be framed and put on the wall . . .

•

Peruvian International Airways may be a small five-plane airline, but it deserves a pat on the back for some of the advertising it's been doing in New York . . . One ad listed names and addresses of over 150 travel agents . . . Another one also listed travel agents and freight forwarders, not only in New York but in various parts of the world . . . We understand that it's paying off . . . The agents are throwing PIA a substantial amount of business . . .

Charles Greene has been named district sales manager for Flying Tiger Line at San Francisco. He has formerly served eight years with TWA and Matson Air Transport as passenger agent and cargo salesman.

Ellis F. Furda has been appointed city traffic manager of Continental Air Lines in Wichita Falls, Tex., replacing **Robert Little**, who resigned.

George A. Stevens has assumed the post of district traffic manager for Mid-Continent Airlines at Tulsa.

John L. (Jack) Burlington has been promoted to assistant manager of passenger sales for TWA, with offices in Kansas City. **Frank McGough** succeeds Burlington as district manager at Cincinnati.

RTCA Charts Traffic Needs

The problem of controlling air traffic in order that quantities of all types of aircraft can move safely and expeditiously throughout the United States is easily the most complex operating problem in aviation today.

It has become the subject of more discussion than any other operational phase of aviation. Numerous committees have considered and debated its various aspects. The possibility of reaching agreement among the many interests involved appeared so hopeless in the past that it always was easier to dream up a system and try to sell it than it was to meet the issue squarely, and obtain agreement upon a development program which might be fruitful.

By April of 1947, it was obvious that some action would have to be taken if the steady growth of aviation were to continue. Congress had intimated strongly that further funds for development and installation of new equipments for the airways would not be forthcoming unless the various interests in aviation could compromise their wide differences of opinion as to what these facilities should be. The Air Coordinating Committee made the first realistic move in the situation by requesting the Radio Technical Commission for Aeronautics to make a complete study of the problem, and to make recommendations for a proper solution.

The RTCA established a committee with representation from the United States Air Forces, the Navy, the State Department, the Treasury, the Federal Communications Commission, the Civil Aeronautics Board, the Civil Aeronautics Administration, the Air Line Pilots Association, the Air Transport Association, the Aircraft Owners and Pilots Association and the Radio Manufacturers Association.

This committee started its deliberations on July 30, 1947, and its final report was accepted by the Executive Committee of RTCA on Feb. 17, 1948. More than 10,000 man-hours of the most competent effort available went into the preparation of the report in the 6-month period during which the committee was in session.

As a first step the committee documented the broad operational requirements which could be agreed upon by operators of various types of aircraft. With these requirements as a guide the committee then studied thoroughly the electronic equipments needed for the proper exchange of information and the evolutionary problem of implementation.

Of all the requirements which had to be met, by far the most difficult were: (1) "the system shall be useable by all types of aircraft in a manner compatible with their performance characteristics and operational applications" and (2) "the aircraft equipments shall result in the minimum detriment to aircraft performance."

Due to the complexity of the task, the committee decided to limit its considerations to air traffic control and the associated *short distance* navigation and landing equipments. In order to determine whether or not presently available equipments in various combinations could be made to satisfy the operational requirements, an arbitrary plan of Evaluation of Merit was devised.

Under this plan it was found that when functioning perfectly, the present system scored a factor of only 42%. However, by the best combination of several additional presently developed equipments, some of which would be useful in the ultimate system, this score could be increased to 67%. Thus it became obvious that it would be necessary to plan the target system in considerable detail and then work backward to arrive at a proper plan for interim help for aviation, along with the necessary evolutionary steps to the ultimate goal. Otherwise the objective inevitably would be influenced adversely by equipments added during the interim period.

Time Table

The report recommends 3 steps to be taken during a period of 15 years to finally accomplish the objective. (1) procurement and wide installation of presently operational equipments during the period 1948-1954 in order that the growth of aviation will not be retarded at or near its present level; (2) immediate inauguration of a development program to perfect the ground and airborne equipments needed in the ultimate system, this to be generally completed before 1959; and (3) the procurement and installation of the final system to be completed by 1963.

The Cost

The report roughly estimates the total cost as follows: (a) To implement Step (1) above—the interim program development and ground installation costs (by government) $183.7 millions; (b) research and development costs of ground and airborne equipment for the target system (by government) $69.7 millions; (c) production and operational installation costs of target system (by government) $498.9 millions; (d) cost of interim airborne equipment to users (military and civil) $191.5 millions; (e) cost of objective system airborne equipment to users (military and civil) $169 millions.

Thus the total direct cost to the government would be $752.3 millions, and the total direct cost to the users would be $360.5 millions over a period of 15 years. This latter figure is based on an estimated total of 100,000 equipped aircraft of all types in 1960.

Interim Plan

Until automatic equipment is available, no radical departures from the present method of manual posting and voice communication are suggested. However, the committee believes that the enroute traffic control problem can be extensively improved by use of VHF omni-directional radio ranges, distance measuring equipments and offset course computers. It also believes that the congested terminal situation can be improved considerably by use of surveillance radar, combined with ILS, precision beam (GCA) radar, and VHF Automatic Direction Finding, when complete implementation of VHF communications has been achieved. The committee specifically recommends the following equipment programs during the evolutionary period:

(1) **The present 4-course radio range** is to remain in operation until supplanted by the VHF Omni-directional radio range. However, the 4-course radio range would not be discontinued until a low-cost, light-weight VHF navigation-communication receiver is available for small aircraft.

(2) **The VHF Omni-directional radio range** must be improved in accuracy, and some transmitters must be relocated in order to aid the flow of traffic. After these improvements are made this facility would remain a basic part of the interim system until about 1962, when it would be obsoleted by a superior facility provided in the target system.

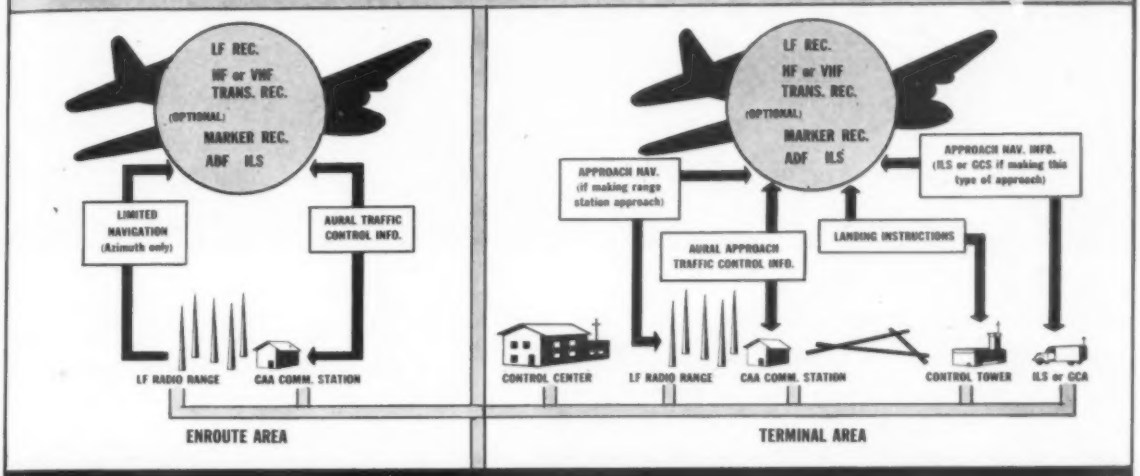
(3) **The complete instrument landing system** is considered to consist of VHF localizer, glide path, precision beam radar, radio marker beacons, and low frequency compass locator stations. The program, although not specific, recommends a considerable increase in the number of landing system elements, particularly precision beam radar (GCA). These equipments would be obsoleted about 1962 by superior facilities provided in the target system.

(4) **Fan and cone radio marker beacons** are to be retained until obsoleted by distance measuring equipment.

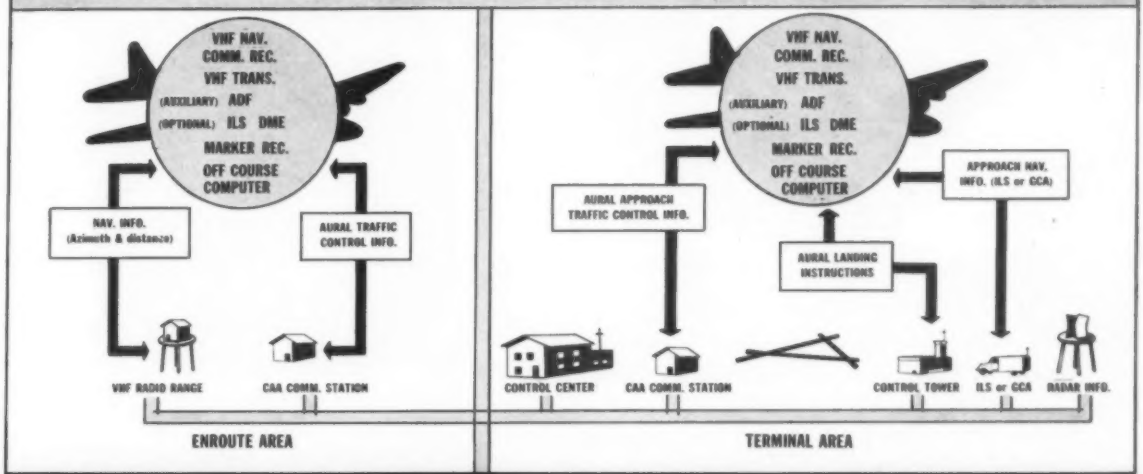
(5) **Distance Measuring Equipment** is an urgent requirement in the interim period, and the service will remain unchanged when integrated with the target system navigation equipment. Thus the investment can be safeguarded, since the function will not be obsoleted.

(6) **VHF Automatic Direction Finding** equipment for airport towers is to be installed as an aid to traffic control where traffic densities warrant. It assists in the identification of aircraft when used with surveillance radar, and in the location of aircraft when other means are not available. It probably would revert to the status of an

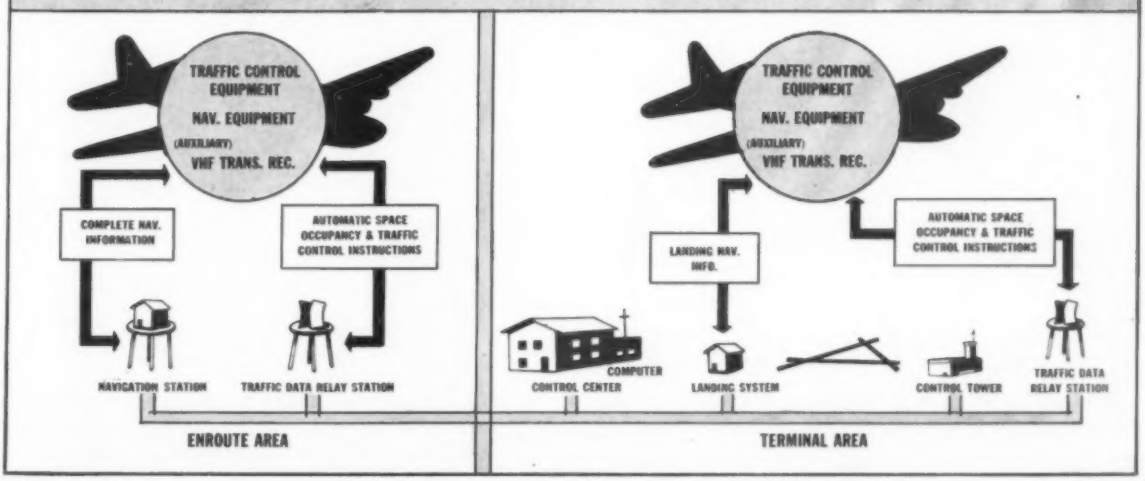
Typical Flow of Information—PRESENT SYSTEM



Typical Flow of Information—INTERIM SYSTEM



Typical Flow of Information—TARGET SYSTEM



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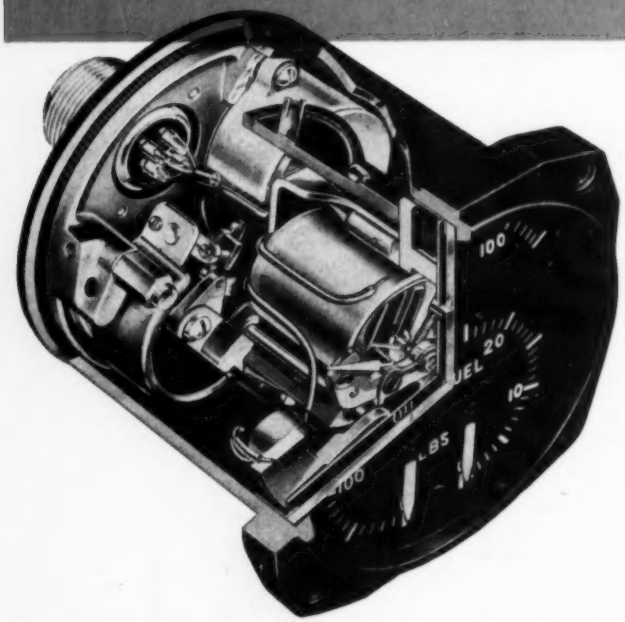

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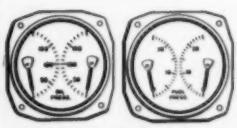

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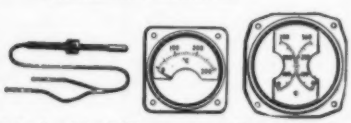

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emergency equipment in the target system but would not become entirely obsolete.

(7) An extensive program of installation of **surveillance radars** at airport terminal areas is strongly urged for purposes of traffic control. These radars would become obsolescent about 1961 as the target system appears.

(8) The limited development of an **airborne transponder** to overcome the weather, altitude, and identity limitations of primary surveillance radar is recommended. These early airborne equipments would become obsolete about 1961.

(9) **The present VHF communication** program is to be completed at the earliest possible date in order to overcome present weather interference with traffic control communications. This program will become an integral part of the target system.

(10) This report covers only the electronic phases of the overall problem, but it takes cognizance of, and hopes that other associated non-electronic developments and improvements will be made, particularly in approach and runway lighting, in clearing obstructions around airports, in airport design, in fog dispersal systems, etc.

The above program does not provide much-needed relief to air and ground personnel in their problems arising from non-automatic aural radio communications. It fails to provide accurate, displayable and storable data concerning aircraft locations in the controlled airspace. However, the advent of the secondary radar portion of the target system can start providing relief from this situation somewhat in advance of the complete system.—*By* THE AERO ANALYST.

(The April 1 issue will include a description of the development program and the target system).

NAVIGATION

50 VHF Ranges Ready

The Civil Aeronautics Administration now has more than 50 omni-directional very high frequency (VHF) radio ranges ready for operation, according to a statement issued by T. P. Wright early this month, just before he resigned as CAA administrator.

Wright said that both accuracy and reliability of the new navigation system—subjects of considerable skepticism in aviation industry circles—had been improved by recent technical developments, and that the agency is moving ahead rapidly to complete by July 1, 1948, installation of the 396 ranges for which funds have been appropriated.

The technical improvements mentioned by Wright were described in a report to him from the Radio Development Division of the CAA's Technical Development Center at Indianapolis. Among them was the adoption of a round instead of a square building to house the antenna, electrical screening of part of the antenna supports and the development of more efficient radio circuits and mechanical equipment.

According to the report, tests both by independent radio organizations and by the CAA show that the ranges and receivers combined now have a maximum error of only plus or minus two degrees, exceeding accuracy requirements established by the Special Radio Technical Division of ICAO.

Various airline experts point out, however, that a possible error of 2 degrees, which amounts to about 2 miles at a distance of 60 miles, hardly represents the ideal for a system in which azimuth accuracy is so important. As a further point, though CAA personnel have for some time talked freely of a 2-degree maximum error, airline experts often have been unable to achieve results claimed by the agency.

The CAA, indicating that development of omni-range equipment will continue, asserted that two devices ultimately to be used with the omni-range system—distance measuring equipment (DME) and the course line computer—are in final stages of experimental development now.

Wright said deliveries to airlines of about one thousand VHF omni-range receivers, reportedly costing in the neighborhood of $1,500 each, will begin this month. He also disclosed that CAA is negotiating with several commercial firms for quantity production of low-cost omni-directional receivers suitable for use in private planes.

Planes Use Radio Station

For the first time a regular commercial radio broadcasting station has been approved as an aid in scheduled air carrier operations. This precedent was set recently when the Civil Aeronautics Administration gave Southwest Airways permission to use station KDON at Monterey, Calif., as a transmitting station for instrument letdowns to the airport there.

When requested by a flight, the radio station sends identification followed by frequent signals which are reported to be unmistakable.

Southwest announced it will apply immediately for approval to use radio stations at seven other California cities.

Daytime Star Shooting

A new "astro-window" enabling navigators on long-range, high-flying aircraft to "shoot" the stars even in daytime has been developed by Bausch & Lomb Optical Co.

The streamlined window installation, designed both for military and commercial airplanes, consists of two plates and is reportedly capable of withstanding a total force of three and one-half tons. Outer plate is a large optical lens, ground and polished to reduce refraction errors, while the inside member

Stratocruisers Take Form—Eight fuselages for the double-deck, 340-mph Boeing Stratocruisers are seen in final assembly area of big Seattle plant. Already tagged according to the airline for which each plane is destined, the hulls now are being rushed to completion. Two Stratocruisers are undergoing CAA type certification tests and the first completely outfitted airline model is nearly ready to fly. Six carriers—American Overseas Airlines, British Overseas Airways Corp., Northwest Airlines, Pan American World Airways, Scandinavian Airlines System and United Air Lines—have ordered a total of 55 Stratocruisers.

is made of plastic and houses a defroster system.

The window's surface projects only two and one-half inches above the plane's skin against six inches for the presently-used astrodomes. Though the designer, Edward F. Flint, did not reveal the window's pressure capacity per square inch, he said it "outdoes by far all contemplated requirements."

"The higher man flies," Flint pointed out in explaining the new navigational aid, "the plainer the stars become, allowing continuous and accurate aircraft fixes anywhere over the earth. In the stratosphere the sky tends to become darker and stars are readily seen in the daytime."

Competition for CAA

One of the Government Printing Office's best sellers for several years has been Civil Aeronautics Bulletin No. 24, titled Practical Air Navigation. Since the original edition in 1935 well over a million copies have been printed. It still sells at a good rate despite the fact that the latest revision was made in 1944-45 and does not cover subjects like pressure pattern flying or electronic navigation aids.

The author of the original Coast & Geodetic edition and the revised CAA editions, Thoburn C. Lyon, has resigned from government service but hasn't lost interest in his book. Finding that the CAA had no immediate plans (or funds) for a revised edition, Lyon dressed up the old text and charts with war-gained knowledge, and wrote new chapters on electronic navigation, pressure pattern flying, long distance navigation, and lightplane navigation.

Lyon's new book, Practical Air Navigation (Commercial Edition) is now on the market in competition with the 1945 CAA edition.

United Air Lines has completed installation of radar altimeters in all of its 109 in-service aircraft and the equipment is in use, according to J. A. Herlihy, United's vice president for operations. Company met the original CAA installation deadline of Feb. 15, Herlihy said.

SAFETY

Exit Markings Standardized

Improvement and standardizaiton of the markings on all emergency exits and cabin doors in passenger air carrier aircraft has been required in a new safety regulation issued by the Civil Aeronautics Administration. Compliance is mandatory by Aug. 1, 1948.

New sign requirements, the CAA said, are the result of a thorough survey requested by the President's Special Air Safety Board, and are designed to correct several important inadequacies in present marking systems.

Principal item in the new regulation requires "that the main exits and all emergency exits . . . be indicated "EXIT" in such a manner that their identity and location are recognizable to any passenger at a distance equal to the width of the fuselage," and that instructions for operating each exit must be readable and understandable by any person three feet away in an emergency at night when all light sources have failed, the regulation reads.

All signs must be in either luminescent letters on an opaque background or vice versa. The regulation advises that letters in the word "EXIT" should be at least three inches high while letters in the instructions should be at least an inch high wherever practicable.

Exit signs must also be placed over, on or next to all crew and service doors which would be available to passengers in an emergency. In addition, all intervening doors, such as those between cockpit and passenger cabin, must be marked in a similar manner.

As to instructions for operating exits, each should include method of access to operating handle (if applicable), direction of handle operation and direction of the door movement. Such instructions should prevent repetition of cases where escape of passengers from aircraft has been delayed or prevented by attempts to operate the exit handle or open the door in the wrong direction.

The regulation does not require marking of exterior areas suitable for cutting to aid escape of airplane occupants. "However," the CAA says, "in view of the recommendations made by the President's Special Board, it is urged that in the interest of public safety such exterior areas of the fuselage be conspicuously marked." At least two such areas on each side of the fuselage should be designated by corner markings in orange-yellow lacquer, the CAA said.

Easier Exit from DC-6

Rework of all DC-6 emergency exit doors, main passenger doors, crew doors, heater compartment and belly cargo compartment doors, has been ordered by the Civil Aeronautics Administration in order to provide safer and more satisfactory operation. The changes, many of which already have been incorporated in numerous DC-6's, must be accomplished by Sept. 15, 1948. Rework involves installation of new latch bolts, stronger operating and locking mechanisms, and an assist handle placed above the main cabin door handle.

A new Special Civil Air Regulation prohibits operation of DC-6 type aircraft equipped with **landing flares** unless such equipment has been satisfactorily insulated. Regulation is effective until May 1 and is intended to cover interval required for providing such insulation on all DC-6's.

SAFETY SLANTS

THE AVIATION and Airport Protection Committee of the National Fire Protection Association will hold a series of meetings at the Wings Club in New York on Mar. 15-16. Sessions of the subcommittees on Aircraft Design Fire Protection, Commercial Air Operations, Airport Fire Protection and Aircraft Rescue and Fire Fighting are planned, as well as an executive meeting to consider recommendations developed by the sub-committees.

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Carelessness in handling flammable liquids and failure to take proper precautions while welding have caused many fires around airports. Within the last month a serious fire occurred at an airport maintenance shop when repairs to a motor vehicle carburetor were attempted in the shop while welding was being done. The vapors from spilled gasoline became ignited and the fire spread rapidly. Just recently an airline mechanic was seriously burned when the vapors from gasoline being used to clean an oil spill flashed back from the coal stove used to heat the shop. He ran from the building a human torch. His life was saved by the quick thinking of another mechanic who tripped him and beat out the flames.

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After every serious accident the airlines are besieged with armchair inventors who have a panacea for the ills that beset airline operation. They usually can tell you about the inventions now in production which they thought of first but someone else cashed in on. Typical of the ideas advanced are "Put dynamite caps at the base of the wings so that in an emergency the pilot could blow them off. The cabin then would not be in danger of fire because it would be clear of the gasoline." Or, "Fix up the windows so that they would blow out on a crash." How to make the idea work, or whether it is practical at all, is usually the least of these amateur Edisons' worries. They either just want to help humanity or are looking for someone to do the development work and pay them a royalty. Occasionally the ideas have merit but have been thought of or tried before. Usually the idea man has not the most remote conception of the weight penalty problem. In spite of this, there is still a chance that someday one of these boys will hit the jackpot, so hearing their stories is a necessary evil.

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American Airlines is reported to be studying possibility of solid loading for its air freighters in an effort to increase the payload. A special CO, fire extinguisher system would be provided since the cargo would be inaccessible in flight. Several of the non-skeds have used this method of loading quite successfully, but the idea is new to scheduled operations.

ENGINEERING

Cutting Parasite Drag

Engineers of the Goodyear Aircraft Corp., in completing a special modification of an Air Force DC-4 under contract with the Air Materiel Command, have succeeded in locating all antenna systems for the plane's 10 radio sets within the structure, thus eliminating an important sources of parasite drag and turbulent air currents.

Principal change required in elimination of all external wires and masts from the aircraft was modification of wing leading edges, vertical stabilizer and other areas to accommodate the antennas. To prevent shielding of radio waves from antennas within these structures, the aluminum skin in each antenna area was replaced with special laminated, resin-impregnated Fiberglas cloth baked to a hard, glass-like material.

The DC-4 now has its marker beacon antenna in the fuselage belly, glidepath-localizer antenna in the radome, radio compass loop in the vertical stabilizer, VHF command and homing antenna in the fin tip and center section, and liaison antenna in the wing leading edges and tips. All antenna have been approved by Air Force except VHF and liaison equipment, currently undergoing tests.

Hydraulic Fluid

Final performance specifications for a non-inflammable hydraulic fluid are now being printed by the Aircraft Industries Association following several months of study by a special committee.

A widespread search for satisfactory non-inflammable hydraulic fluids has been underway for some time now. Both Lockheed Aircraft Corp. and Douglas Aircraft Co., for example, have development projects under way and considerable progress is reported. The new specifications, representing industry agreement on what will be required of a "fireproof" fluid, are expected to expedite the development program. As soon as available, they will be distributed to all possible sources of hydraulic fluid supply.

Aircraft Patents

An integrated wheel and brake combination for aircraft and a new vaned tire to induce spinning on approaches were among items recently patented.

The wheel-brake combination also adds air contained within the wheel structure to that within the tire, thus providing an improved cushion to absorb landing shock. The unit is designed principally for use with the so-called tubeless tire. Patent has been assigned by the inventor to the Firestone Tire & Rubber Co.

Also patented was a new system of airplane cabin pressure control which provides for limiting the discharge of air from a cabin to maintain constant pressure therein up to a selected altitude. The mechanism works on the pressure differential principle. General Electric Co. has been assigned the patent.

An improved propeller de-icing apparatus designed for discharging fluid forward of the blade along its leading edge so that it spreads over the entire blade, was patented by John de Stefano, Jackson Heights, N. Y.

Added Streamlining—Although this Air Force C-54 is equipped with 10 radio sets, all external antennas have been removed as result of special modifications by Goodyear Aircraft Corp., Akron, O. Arrows indicate where aluminum surfaces have been replaced with a special resin-impregnated Fiberglas cloth, baked to a hard finish. These replacements prevent shielding of radio waves from antennas within these sections.

DAL's Double Disc Brake

Delta Air Lines has adopted a new double disc brake recently developed by the Goodyear Tire and Rubber Co. for its fleet of 19 DC-3's and installation is expected to be completed by the end of next month.

"Important savings in weight, economy of operation and maintenance prompted us to make the change," said C. H. Dolson, Delta's operations manager. The new brake assembly is 75 pounds lighter per airplane than the multiple disc brakes formerly on the aircraft.

Delta first installed a test set of wheels with double disc brakes on a cargo DC-3 last fall. After more than 300 landings, the brakes were dismantled and found to be in excellent condition so they were reassembled and put back into service with no new parts required.

One feature of the brake is a self-adjusting mechanism permitting a visual check on lining wear before each flight.

The Third National Flight Propulsion Meeting of the Institute of the Aeronautical Sciences will be held at the Hotel Carter, Cleveland, Friday, Mar. 19. Program will include three technical sessions dealing with jet engine problems and performance possibilities, plus a luncheon and dinner for IAS members and guests.

COMMUNICATIONS

Arinc Budget Cut

At recent meeting of directors of Aeronautical Radio, Inc., size of the board was reduced from 17 to 11 members, a 26% reduction in the organization's budget was approved, and a new system of levying assessments on member airlines was adopted.

Henceforth airlines will be billed for services rendered by Arinc on a project basis instead of being assessed in proportion to the number of revenue miles flown.

All officers, including D. W. Rentzel, president, were re-elected. New chairman of the board of directors is Emory S. Land, president of Air Transport Association. Other directors named were: J. R. Cunningham, United Air Lines' director of communications; K. R. Ferguson, vice president-engineering and planning, Northwest Airlines; W. W. Lynch, system communications supervisor, Pan American Airways; J. G. Flynn, vice president-operations, Amer-

OPERATIONS-MAINTENANCE

ican Overseas Airlines; Paul Goldsborough, TWA's director of communications; D. C. McRae, Eastern Air Lines' superintendent of communications and maintenance engineering; Ray Shrader, Braniff Airways' vice president-operations; J. A. Young, Chicago & Southern's operations manager; D. DeVault, Mid-Continent Airlines, superintendent of communications, and L. G. Rodefeld, Delta Air Line's superintendent of communications.

Shift to Interphone

The Civil Aeronautics Administration has laid the groundwork for a shift from teletypewriter to interphone facilities for transmitting aircraft movement messages from airline operations offices to Air Traffic Control centers.

In a revision of its policy which formerly permitted air carriers to install teletype printers in the centers, CAA now advises that additional interphone facilities instead of more printers should be installed wherever possible.

The new policy also provides that upon installation of new type flight progress boards in the centers, the use of teletypes for handling movement messages will be discontinued entirely, on a trial basis, with interphone facilities serving the purpose. If such trial is satisfactory, the CAA says use of teletypes should be permanently discontinued.

The policy revision, reported to have been opposed by the Air Transport Association fits in with the CAA plan to streamline ATC center operations. With the use of interphones, the CAA says, movement messages from all carriers can be recorded directly for easy and positive reference, and posting of progress boards will be facilitated.

Weather by Facsimile

A new weather facsimile service for the transmission of weather maps to all Air Force bases in the U. S. has been developed jointly by the Air Force and the Signal Corps.

Under the new system, comprising 15,000 miles of circuits, domestic as well as international weather maps are prepared at the main control point at Arlington, Va., and sent from there at half-hour intervals to all Air Force bases. All material is transmitted in the form of charts and requires no further plotting at the various stations.

Plans are in the formative stage for eventual participation in the service by commercial airlines.

PLANES

Ahead With Pioneer

Plans of Northrop Aircraft Inc. for production of its three-engined Pioneer transport will not be seriously affected by the recent crash of the experimental model during a difficult flight test, according to John W. Myers, Northrop's vice president in charge of sales. The accident destroyed the aircraft and

brought death to its pilot, L. A. Perrett.

The prototype already had flown more than 100 hours and yielded all essential data before a part of an experimental vertical stabilizer broke off during one of its final tests when the plane was being flown at extreme angles of yaw, thus causing a crash.

New British Wayfarer

Bristol company of England has produced a new version of its Type 170 Wayfarer, also known as the Freighter when fitted for all-cargo transport. New plane has 10-foot longer span and a strengthened wing structure. More power has been secured from the twin Hercules engines and larger, newly-designed propellers have been installed.

Modifications have boosted the Wayfarer's pay load by 3,000 pounds, the company now claiming the plane can carry 6 tons 380 miles in slightly more than two hours. Cruising speed is given as 162 mph with top speed 224 mph.

92,644 Planes Registered

The oldest aircraft among the 92,644 planes registered with the Civil Aeronautics Administration is a Thomas Morse "TM3 Scout" with a LeRhone engine, built in 1917, a statistical study made by the CAA's Office of Aviation Information has revealed.

Next oldest still registered are three Curtiss "Jennies" of World War I fame, followed by a Curtiss Oriole of 1919 vintage.

The statistical report, the CAA believes, will be especially useful to aircraft and accessory manufacturers, maintenance organizations and airport operators since it tabulates all aircraft registered, including specification-number, model, designation, engine make, takeoff horsepower and the number of such planes licensed. Included also is a breakdown by states of aircraft registered.

Copies of the report are available without charge from Office of Aviation Information, CAA, Washington 25, D. C.

Mid-Continent Airlines has purchased three DC-3s from Northwest Airlines. When they are put into service schedules will be increased on main routes.

MODIFICATION

Texas Engineering and Manufacturing Co., Dallas, has contracted to convert four C-47's to 28-passenger airliners for Avianca Company of Colombia, a Pan American subsidiary. TEMCO recently completed a similar conversion job for the South American carrier involving seven airplanes.

Western Air Lines has completed conversion of its DC-4 equipment from 55-passenger seating to 44 seats. The change-over was made to provide greater passenger comfort.

MAINTENANCE

Opens New Base

Alaska Airlines, Inc. is opening a major overhaul and maintenance base at Paine Field, Everett, Wash. Edward S. Hudson, formerly manager of Boeing

Stewart Hudson

Aircraft Company's service center at Seattle, has been named vice president of the airline and Robert L. Stewart, formerly superintendent of operations at the Boeing center, has become director of engineering and maintenance, both men being assigned to the New Paine Field base. Another maintenance base is being opened by the airline at Great Falls, Mont.

Aviation Maintenance Corp., Van Nuys, Calif., has signed a contract with American Overseas Airlines for major overhaul of four-engined aircraft, its first such contract with a commercial airline. Agreement provides for major overhaul of three DC-4's, installation of new interiors and fire prevention modifications on two more, and is subject to indefinite extension to cover additional aircraft under the same terms.

AiResearch Manufacturing Co. has sent Russ Anderson of its service department to Australia to assist Qantas Empire Airways and Trans-Australia Airlines in setting up overhaul procedures for the air conditioning equipment in the Constellations purchased by Qantas and the Convair-Liners ordered by TAA. Up to now AiResearch has had the airlines return air conditioning units to the factory for overhauls, but the distance to Australia made it advisable to establish overhaul facilities in that country for planes used in the Southwest Pacific and the Far East.

NEW EQUIPMENT

Convair Latching Switch

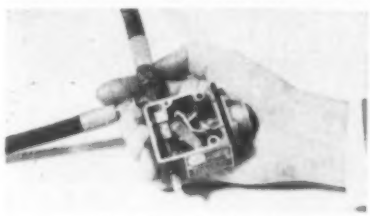
A unique-type latching switch has been developed by Consolidated Vultee Aircraft Corp. for electrical and mechanical indication of pressure discharges or excessive pressures.

Invented by L. J. Bordelon, chief flight engineer for Convair, the unit was designed primarily for use in the fire extinguishing system on the Convair-Liner. It is only 2½ by 3 inches and weighs less than six ounces.

As shown in the accompanying illustration, lines from CO_2 bottles lead to a piston chamber inside the box. When a CO_2 bottle discharges, pressure forces the piston out, actuating an electrical switch. A light in the cockpit goes on and remains on to remind the pilots that the main and/or reserve CO_2 has been used.

A re-set knob, attached to the piston, is partially colored red to give an additional visual indication of discharge to maintenance crews and it also can be operated manually to test the system. Furthermore, a small decal seal on the outside of the box covers an opening in the switch casing. A small bleed hole, which is opened when the piston is displaced, bleeds off the pressure and permits the gaseous medium to enter the switch and blow the decal seal for another indication of discharge.

For maintenance crews the latching switch obviates the necessity of weighing CO_2 bottles to determine if they have been discharged. The switch is re-



set manually after bottles have been replaced.

Since its development, the switch has been used for a completely different purpose on other airplanes equipped with combustion-type heaters. It is connected to the air ducts of the heater. If for any reason a backfire or explosion occurs, the switch is actuated, instantly cutting off the fuel and ignition. Operation of the heater can then be restored only on the ground.

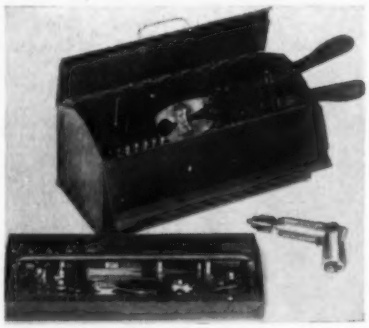
Convair's switch is being manufactured by the Airite Products Co., Los Angeles, and is available for use with gases, although a unit can also be provided for use with liquids. No oiled parts are used, so the switch is satisfactory for use with oxygen tanks or lines. It can be made to actuate at any desired pressure.

Silicone Rubber Sponge

A new sealing and vibration dampening material, silicone rubber sponge, has been announced by The Connecticut Hard Rubber Co., New Haven, Conn. Sponge has a wide temperature range from 500 degrees F. down to —70 degrees F., at which temperature it is still pliable. Such a range gives the product an advantage both as a sealant and as a vibration dampener over natural rubber which in most cases is satisfactory only between 185 and —45 degrees F. Sponge also costs less than solid silicone rubber materials often used for such purposes, company says.

Sheet Metal Kit

A specially assembled aircraft sheet metal kit, containing every tool or accessory required for sheet metal work



on planes, is being introduced by Aircraft Tools, Inc., 2306 E. 38th St., Los Angeles.

Built in the style of a fishing tackle box, the kit has a removable upper tray for small tools and accessories, with a roomy lower section for larger items. A drop front makes all tools easily accessible. Kit contains 202 separate tools.

VHF Antenna

Communications Company, Inc., Coral Gables, Fla., has announced a new high gain, broad band VHF antenna, designated Model 244-2P. A two-element stack array, self-supporting, mast-type antenna, it is especially designed for communication within the aeronautical frequency range of 108 to 132 megacycles. In actual operation, company reports, the new antenna will effectively increase the radiated transmitter output 2.8 times and when used with the receiver, will aid reception considerably. Overall length is 130 inches and total weight, 20 pounds.

Impact Kit

Ingersoll-Rand has introduced a compact tool kit featuring a new electric impact tool which can be used for many different jobs simply by changing to the proper accessory. Impact tool weighs 6½ pounds and provides time savings running as high as 90 per cent, the company claims. Standard kit includes tool and accessories for nut-running and nut removal; drilling steel, masonry or wood; reaming, applying or removing studs; tapping, driving and removing screws, extracting broken cap screws and studs, and performing hole saw and wire brush work.

EQUIPMENT MFG.

D. H. Jackson, president of **Victor Chemical Co.**, Los Angeles, announces appointment of American Factors, Ltd., of Honolulu as exclusive distributor for Victor's 45 chemical compounds in Hawaii and the Pacific Southwest. Walter J. Hyatt, Victor research engineer formerly with Lockheed Aircraft Corp., has gone to Hawaii to aid the Honolulu concern.

Eaton Manufacturing Co., Cleveland manufacturer of aircraft engine parts, is publishing for restricted distribution a comprehensive "Chronicle of the Aviation Industry in America." Covering the history of aviation from 1903 through 1947, it is written in diary style and includes numerous illustrations and references from private collections and old texts. Copies are slated for airlines, manufacturers and other major branches of the aviation industry.

Daily Plane Utilization
International

	Nov.	Dec.
American		
2 eng. pass.	6:18	6:14
4 eng. pass.	6:05	9:20
Cargo	4:31	6:11
Braniff		
2 eng. pass.	7:00	6:42
4 eng. pass.	5:28	6:47
Cargo	....	3:43
Capital-PCA		
2 eng. pass.	7:07	6:54
4 eng. pass.	5:08	4:24
Cargo	1:47	2:42
Caribbean		
2 eng. pass.	2:46	2:37
C & S		
2 eng. pass.	7:40	7:39
4 eng. pass.	7:59	7:18
Colonial		
2 eng. pass.	4:55	4:00
Continental		
2 eng. pass.	8:26	8:37
Cargo	....	:09
Delta		
2 eng. pass.	8:04	8:17
4 eng. pass.	6:53	9:32
Cargo	2:31	5:56
Eastern		
2 eng. pass.	10:10	10:13
4 eng. pass.	7:28	8:19
Cargo	5:24	6:47
Hawaiian		
2 eng. pass.	6:10	6:23
Cargo	2:25	2:47
Inland		
2 eng. pass.	9:40	10:10
MCA		
2 eng. pass.	6:57	6:55
National		
2 eng. pass.	4:37	4:34
4 eng. pass.	9:40	7:59
Northeast		
2 eng. pass.	5:28	5:11
4 eng. pass.	2:13	1:49
Northwest		
2 eng. pass.	4:28	4:18
4 eng. pass.	9:03	8:28
TWA		
2 eng. pass.	10:41	9:57
4 eng. pass.	7:10	6:47
Cargo	4:42	3:55
United		
2 eng. pass.	8:23	9:24
4 eng. pass.	7:39	8:44
Cargo	4:55	5:14
Western		
2 eng. pass.	8:12	7:51
4 eng. pass.	7:28	7:42
Cargo	....	:28

La Guardia Busiest Field

Scheduled air carrier landings and take-offs accounted for 34.4% of the total aircraft operations at the nation's 25 leading commercial airports last year, according to official figures reported to the Civil Aeronautics Administration by control towers at the fields.

Combined aircraft operations at the 25 terminals totaled 4,372,181, of which 1,505,183 were movements of commercial transport planes. Estimated air carrier movements at the same fields in 1946 totaled 1,390,867, or approximately 33.6% of total operations.

Several major airports, notably La Guardia Field and Miami, reported less carrier activity last year than in 1946, but most of the larger fields registered gains. Overall increase for the 25 terminals was 8.2%, as compared with the previous year.

Carrier operations into and off the entire 137 airports where CAA control towers are located totaled 2,854,481 landings and take-offs in 1947, as against 2,536,044 in 1946. The latter figure, however, represented 20% of the total landings and take-offs, including local and itinerant Army, Navy and civilian aircraft, whereas air carrier movements represented only 16.2% of the 17,669,617 plane operations of all types at the 137 fields last year.

La Guardia Field retained its position as the busiest terminal in the country for air carrier operations, reporting 140,291 scheduled air carrier landings and take-offs in 1947. Trailing the New York terminal were Chicago Municipal, with 131,663 aircraft movements and Washington with 105,224.

Of the total activities last year, commercial carriers accounted for 16.2%, private civilian itinerant and local flyers for 74.8%, and Army and Navy craft for 9%. Total operations were up about 40% from the previous year—17,669,617 against 12,659,785. Private flyers totaled 13,220,616 operations, an increase of 51.26% over the 1946 figure of 8,739,728. The increase in military operations was from 1,384,013 to 1,594,520, a gain of 15.20%. Scheduled air carrier landings and take-offs were up 12.6% from 1946.

45% for Large Airports

Nearly 45% of the Federal-aid funds slated for allocation under the National Airport Plan for the next three years will be used for construction or improvement of Class 4 and larger airports, the 1948 revision of the plan shows.

The revised plan shows 4,835 airports as needing to be developed or further improved at a total estimated cost of $1,048,500,000, of which sponsors would provide $578,800,000 and the Federal government $469,700,000.

The plan includes 52 large airports (Class 4 or larger), 4,005 smaller airports (Classes 1, 2 and 3), 291 seaplane bases and 37 heliports. The 502 large fields would cost an estimated $493,500,000, of which $200.4 millions would come from Federal-aid funds.

The 4,005 smaller airports would have a total estimated cost of $549,100,000 of which $366,300,000 would be Federal funds and $282.8 millions would come from sponsors.

Of the 502 large airports, only 17 would be new fields, the remaining 485 projects being additions and improvements to existing airports.

High-Intensity Flashers

A set of new high-intensity flashing lights, which glow red-orange in the neon band close to the infrared spectrum, are undergoing tests at Lockheed Air terminal as an approach light aid. Reports from pilots have been quite favorable.

Installation includes four lights set in batteries of two each at the approach end of the airport's instrument runway. One set flashes directional with the runway, while the other pair is tilted at an angle of 23 degrees and upward to focus at the break-out point 800 feet over the range station on an instrument approach. On the approach the pilot picks up the latter set of lights to identify the runway, makes his turn and comes in for a landing on the runway directional lights.

On clear nights the beams can be seen from the marker beacon at Chatsworth, 16 miles away, and under fog conditions lights are visible at 1¼ miles. Despite their penetration, lights give no glare, no cross beam in fog and no reflection.

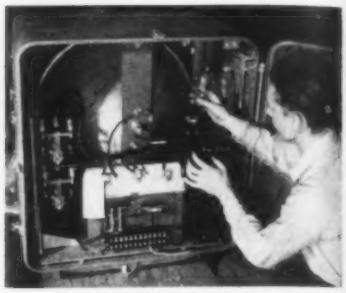
New system is not intended to take the place of a standard approach light system, but low cost of the lights makes them a possible aid at airports unable to install a full approach light system. Lights cost $850 per unit installed. It has been suggested that airports having an approach light system on one runway, could install the new lights on several other runways at modest cost.

The lights, developed by Dallons Laboratories of Hollywood, have 36-inch silvered glass reflectors and elements with 1,000-hour life expectancy. Total weight of an installation is 395 pounds.

Aircraft Operations at 25 Leading Airports*

	1947		1946	
	Air Carrier Operations	% of Total Operations	Air Carrier Operations	% of Total Operations
1. La Guardia	140,291	82.7	147,297	75.0
2. Chicago (Mun.)	131,663	63.9	124,254	65.3
3. Washington	105,224	65.9	105,167	58.2
4. Miami	82,062	42.6	84,013	42.4
5. Los Angeles	73,339	44.9	N. A.[1]	
6. Pittsburgh	68,457	50.1	63,359	57.5
7. San Francisco	67,585	42.2	53,635	44.9
8. Dallas	64,662	53.2	61,912	43.5
9. Detroit (Willow Run)	64,315[2]	83.4	25,705[3]	22.5
10. Cleveland	62,976	12.1	54,371	11.4
11. Kansas City	58,163	26.8	54,484	30.1
12. Boston	55,957	62.0	49,214	68.2
13. St. Louis	50,630	26.1	46,878	19.0
14. Newark	50,099	44.3	45,744	43.4
15. Atlanta	48,549	11.1	45,302	12.9
16. Jacksonville	48,489	52.1	48,044	69.9
17. Philadelphia	45,112[4]	71.7	24,107[5]	84.9
18. Denver	43,335	19.5	35,317	18.2
19. Cincinnati (Covington)	39,111	36.9	30,000[6]	
20. Oakland	35,004	15.2	29,000**	N.A.
21. Nashville	34,652	40.4	34,976	50.7
22. Indianapolis	34,359	13.0	30,448	N.A.
23. Portland, Ore.	34,171	51.0	27,000**	N.A.
24. Burbank	34,112	26.1	76,444	69.4
25. Ft. Worth	32,865	21.6	39,008	23.3
Total	1,505,183	34.4	1,390,867**	33.6
Total for all 137 CAA towers for 1947	2,854,481	16.2		
Same for 1946	2,536,044	20.0		

* Landings and take-offs. **Estimated.
[1] Present Los Angeles airport not open in 1946; Burbank figures reflect traffic.
[2] Covers last 11 mos. of year only. [3] Covers only last six mos. of year.
[4] Covers operations at Southwest Airport for last 9 mos. of year.
[5] Figures cover only last six mos. of year.
[6] Estimated operations at Lunken, Covington not open in '46.



Electronic Flasher—Key component of the Westinghouse all-weather approach light system for airports is this 3.3 billion candlepower Krypton light used in the approach line. The compact assortment of equipment installed behind the light's reflector comprises an automatic electronic timing system which flashes the light on and off in a predetermined sequence. This and other early units produced by Westinghouse are for the first full installation of the approach light system at New York International Airport.

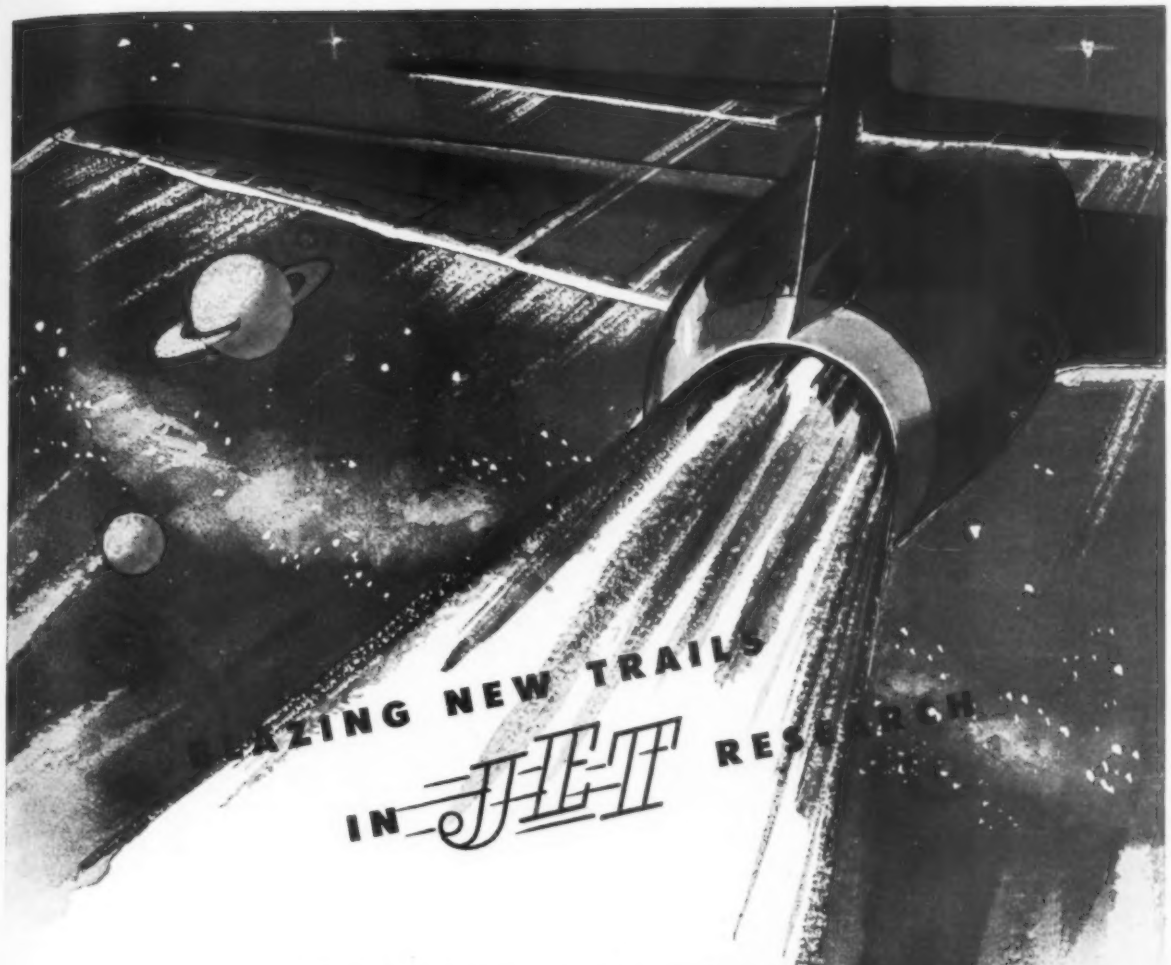
AIRPORT BRIEFS

Cleveland: Annual report reveals that Cleveland Airport operating revenues last year exceeded all previous years. City received $56,000 in hangar rentals, $118,000 in landing fees, $3,000 from telephone pay stations, $3,500 from miscellaneous sources, for total of $180,500. This was $80,000 more than was budgeted for airport expenses. Charles A. Rheinstrom, Inc., aviation consultants, has been appointed to make a survey of passenger terminal facilities at Cleveland. It was reported that the city will pay the consulting firm $25,000 for the survey and recommendations for improvements, plus $3,000 for traveling expenses.

La Guardia: Operating revenues at La Guardia Field between June 1 when the Port of New York Authority took over and the year-end amounted to $952,552, or $50,000 more than all costs there and at Idlewild. PA commissioners have authorized expenditure of $830,000 for a 14,000 ft. dyke at La Guardia, which, when completed in about five months, will protect the airport from extreme high tides such as hindered operations there early this winter. The dyke will be 2-5 ft. above level of the field.

Las Vegas: Department of the Interior has taken action to make approximately 1,320 acres of Federal public lands available to Las Vegas, Nev., for an airport. City has raised $750,000 through a bond issue for the purpose. Arrangements for transfer of the land for airport purposes constitute the first action taken by Interior Department under provisions of the Federal Airport Act of 1947.

Palmdale: Los Angeles County will spend $100,000 in sponsor's funds and $500,000 Federal aid on Palmdale airport, mostly for passenger facilities, to provide airlines with an all-year, fog-free alternate field for Los Angeles.



Experienced airmen would naturally expect Eclipse-Pioneer to be "out in front" on any new aviation development. And this Eclipse-Pioneer tradition is well exemplified in the research and development that has been going on in jet equipment for years. Today, as so well-proven in the past, you can expect the first and finest from Eclipse-Pioneer wherever imagination must go beyond present horizons.

Production, development, and research at Eclipse-Pioneer now includes the following jet components: *Booster coils • Gear Boxes • Complete Fuel Control Systems • Magnesyn* and Autosyn* Fuel Pressure Indicating Systems • Magnesyn and Autosyn Oil Pressure Indicating Systems • Autosyn Flowmeter Systems • Engine Starting Equipment • High-Speed Generators* • Also many others in early research stages. Detailed information available on request from responsible organizations.

*TRADE MARK REG.

E P

Bullish Outlook on Cargo

The nation's principal air freight carriers, both certificated and non-certificated, anticipate a better than 100% increase in the volume of freight moving by air in the United States during 1948, as compared with last year's traffic.

This "bullish" outlook was revealed in Public Counsel's exhibit in the Air Freight Rate Case, one part of which listed carriers' estimates of the volume of air freight in 1948.

Increases foreseen by the major certificated carriers ranged from a modest 2.34 million revenue ton miles estimate by Northwest Airlines to an impressive 28.7 million ton mile estimate by American Airlines. Estimates of increases in the business of the larger non-certificated cargo lines ran from a mere 1.2 million ton miles for Air Cargo Transport to a whopping 35.6 million ton miles for Slick Airways.

Taking only the estimates of six certificated carriers—American, Delta, Eastern, Northwest, TWA and United—the exhibit shows that these lines jointly flew slightly over 34,000,000 revenue ton miles of air freight in the 12 months ended Dec. 31, 1947, and are expecting to fly no less than 87.3 million ton miles this year. And even if last year's freight and express were combined, the total volume for the six lines would be only 57,672,711 ton miles, or about two-thirds the ton mile volume of freight alone that is predicted for this year.

The non-certificated all-cargo lines are even more "bullish." Data submitted by five of them—Slick, California Eastern Airways, The Flying Tiger Line, Willis Air Service, and Air Cargo Transport—show that their combined volume of freight for the year 1947 was approximately 43,300,000 ton miles, and their estimates of 1948 volume run to a total of 105,500,000 ton miles.

Among individual carriers, Slick was seen to be not only the largest carrier of air cargo in this country last year but also to be the most optimistic as to this year's volume of business. It flew a reported 21,937,083 ton miles of freight last year and estimated its 1948 volume at 57.5 million ton miles. This estimate was based on the 1948 air freight potentials shown in a Curtiss-Wright Corp. study and on estimated potentials given in Charles Rheinstrom's study of last summer.

American Airlines, which flew 14,839,839 ton miles of air freight last year, including five months of operation by its Cargo Contract Division, estimated its 1948 volume would be approxibately 43.5 million ton miles.

Delta estimated 3,600,000 ton miles volume for 1948, as compared with a 1947 volume of 876,129 ton miles.

United's estimate of 18.2 million ton miles of freight in 1948, as against 10.1 millions flown last year, was based on an assumption that it would carry one-third of the scheduled carriers' freight ton miles at rates averaging 14c per ton mile.

Eastern estimated a 1948 freight volume of 9.9 million ton miles, as compared with a 1947 volume of 2.3 million ton miles.

Northwest predicted an increase from last year's 951,655 ton miles of freight to 3,300,000 in 1948, but admitted the estimate to be "subject to serious correction" because of its being based on anticipated deliveries of new planes.

The Flying Tiger Line, which flew 5,788,476 ton miles of freight last year, estimated its 1948 volume would be 11.6 million ton miles, basing the estimate solely on present operations. California Eastern gave no basis for its estimate of an increase from last year's 11,139,790 ton miles to a 1948 volume of 19.2 million ton miles.

Willis flew 2,231,083 ton miles in 1947 and estimates its 1948 volume will be 13.8 million ton miles, basing the estimate on an analysis of revenue tons and ton miles per route for a week, expanding the weekly figures for the year and correcting by 15% for flights not completed.

Air Cargo Transport estimate of 3.4 million ton miles this year, as against 2.2 million last year, was based on last year's increase, by outside studies of the air freight potential, and on additional equipment to be obtained this year.

Cargo Promoters—Anticipating continued rapid growth in air cargo volume, these members of the Industry Cargo Sales Promotion Committee met in Chicago recently to map future plans. Left to right: Guy W. Springer, Capital Airlines; Frank Macklin, Air Transport Association; Arthur C. Smith, Western Air Lines; Paul Pate, Delta Air Lines; and Committee Chairman M. P. Bickley, cargo sales manager of United Air Lines.

Cargo Hearing Ends

Complex estimates and contradictory statements dotted the record of the Air Freight Rate Case hearings, which closed Feb. 25, but one fact stood out clearly in the welter of testimony and exhibits: some air freight rates now in effect are well under the cost of service rendered.

Not one of the many carriers, certificated or non-certificated, indicated it could break even on the prevailing tariff structure, and several of them frankly said the rates were too low. In a bid for further development of the nation's air freight potential, the certificated and non-certificated carriers last summer and fall engaged in a tariff battle which wound up with rates down in some instances to less than 13c per ton mile.

Purpose of last month's hearing instigated by CAB was to determine whether these rates were economically justifiable.

On this subject of how much it costs to carry a ton of freight one mile most of the certificated carriers were silent, claiming there were too many complex and variable factors to enable them to make a proper segregation of costs directly applicable to their freight operations, as distinguished from the carriage of passengers, mail and express.

American Airlines came up with a figure of 20.01c as the cost of producing one ton mile of air transportation with a load factor of 100%, but said it could not go beyond this and attempt any allocation of costs between specific types of service because of the complexity of items affecting costs. This figure was higher, of course, than those of the non-certificated all-cargo lines such as Slick Airways and California Eastern, but American posed the question: "Whose costs should be considered in determining rates?"

Elaborating on reasons for the differences between its own cost estimates and those of some of the non-certificated carriers, it cited such factors as average length of hop (AA, 269.5 miles; Cal Eastern, 742.9 mi.; Slick, 740.2 mi.; Fly-

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Thus, the Sperry Gyropilot's accurate control of the aircraft brings to passengers the comfort of smooth flight even in rough air . . . to the pilot relaxation and higher efficiency . . . to the airline operator greater schedule reliability.

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ing Tigers, 1,341.8 mi); route restrictions; seniority of pilots, resulting in higher salaries; varying requirements of regulations with which American must comply and those under which non-certificated lines are permitted to operate; and higher rates of depreciation for combination passenger-cargo planes than for all-cargo planes.

Examiner Herbert K. Bryan set Mar. 22 as the deadline for filing of briefs in the case and announced that the record would be certificated directly to the Board for decision, by-passing the usual examiner's report.

Trans-Caribbean Fined

Trans-Caribbean Air Cargo Lines, Inc., New York, has been fined $1,500 in Federal Court, Brooklyn, on three counts of violating the Civil Aeronautics Act. In imposing a fine of $500 on each of three charges preferred by CAB enforcement attorneys, the judge admonished Trans-Caribbean that the court expected no further violations.

Previously the carrier had pleaded nolo contendere to the charges of carrying passengers on three DC-4 flights from Rome to New York.

Commercial Cargo Entry

Boeing Airplane Co. has formally entered its candidate, the 70-ton Stratofreighter, in the commercial all-cargo aircraft field with publication of a comprehensive description of the new plane.

The Stratofreighter is the commercial cargo transport version of the YC-97 series military transports put into operation in Pacific areas by the Air Transport Command last year. Partner for Boeing's passenger-carrying Stratocruiser now undergoing type certification tests, the Stratofreighter corresponds almost exactly to the Air Force's YC-97A which substitutes Pratt & Whitney 3,500-hp Wasp Majors for the 2,200-hp Wright Cyclones used in the YC-97's introduced in 1947. The first YC-97A was test flown for the first time in January.

Having a maximum takeoff weight of 140,000 pounds and a top pay load of 43,000 pounds, the big transport claims a cruising speed of 340 mph at 25,000 feet, Takeoff distance over a 50-foot obstacle, fully loaded, is 4,060 feet, says Boeing. Landing distance, with two of the plane's 4-bladed Curtiss electric propellers reversed, is 3,860 feet. Direct operating costs, according to Boeing engineers, are 4.2c per ton-mile.

Wing span is 141 feet, 3 inches; length is 110 feet, 10 inches, and heighth overall is 38 feet, 3 inches. Cargo space totalling 6,848 cubic feet on two decks can accommodate one package 2½ x 7 x 61 feet or three items each 3 x 3 x 26 feet. Maximum heighth in top compartment is 8 feet, while maximum headroom in two lower compartments is 6 feet. Pressurization equipment is standard, with refrigeration and temperature control optional.

One feature emphasized by Boeing engineers is the big plane's economy of operation. Direct operating costs, they say, are only 4.2c per ton-mile. Other economy items claimed include provision for direct, rapid loading and the comparative ease of maintenance resulting from Boeing's extensive development of the C-97 series aircraft. Parts problem is simplified by the fact that the Stratofreighters, Stratocruisers and C-97A's all use the same power plants, wings, control surfaces, landing gears and other components.

Ground Transport Puzzler

When is ground transportation incidental to air transportation and when is it part of a combination ground-air service? This question has been bothering the Interstate Commerce Commission, which believes some standard should be developed for distinguishing between the two kinds of ground transportation. It hopes to have its answer soon.

At request of the ICC, Russell B. Adams, director of CAB's Economic Bureau, has sent out a letter to all certificated airlines, all non-certificated cargo carriers and all large non-certificated irregular air carriers inviting comments and suggestions for defining an area in which pickup and delivery service may be offered by an air carrier without the requirement of an ICC-issued motor carrier certificate.

Posed by Adams as the major questions involved were: (1) Should ground transportation provided in air carrier tariffs and offered under the responsibility of an air carrier either on its own trucks or through contracts and arrangements with transportation companies be considered incidental to air transportation and thus exempt from ICC regulations? (2) Should such ground transportation be limited to service within a defined area, and what should be the size of a defined area if used? (3) What limits, if any, should be imposed on ground transportation incidental to air transportation to distinguish it from a combination service? (4) Should the same rules or limitations apply to passenger services and to cargo services. Deadline for comment is Mar. 24.

Measuring Made Easy

It wasn't many months ago when air cargo volume was so small that airlines didn't regard as significant the time and guesswork involved in the measurement of cubic dimensions of shipments which, due to their bulkiness, were arbitrarily assessed on the basis of one pound for every 300 cubic inches of space used. Recently, studies prompted by the vastly increased flow of air cargo and the consequent increase in time and expense involved have brought forth two gadgets to speed up such measurements.

One such gadget, a cube stick (a yard stick with built-in logarithmic scales), was described in the March 1 issue of AMERICAN AVIATION (page 23). Another —and possibly a simpler—cargo-measuring gadget is now being offered by Air Cargo, Inc., to its 19 member airlines.

The latter device, called an Air Cargo Computor, is a pocket-size cardboard gadget somewhat similar to a navigation computor. After the outside dimensions of a package have been obtained through use of an ordinary yardstick, the cargo handler gives a quick spin to the computor and comes up in a jiffy with a reading of the weight of the package in terms of 300 cubic inches per pound.

Hope of the airlines is that these gadgets will eliminate all guesswork in the determination of charges for bulky shipments, guesswork which they think in the past has erred heavily in favor of the shipper.

CARGO AGREEMENTS

United Air Lines has signed interline cargo agreements with 11 international carriers whereby shippers in its 79 route cities are linked with 325 foreign cities in more than 100 countries. Participants in the agreement include: Air France, BOAC, C & S, LAMSA, Northwest, Pan American, Peruvian International, Philippine Air Lines, SABENA, and SAS.

Chicago and Southern and Pan American Airways have entered into an agreement aimed at simplifying international monetary transactions and expediting clearance of air shipments at international gateways. Instead of having to wait until a shipment had been turned over to PAA at a gateway, C & S is now able to issue Pan American air waybills on the spot. A uniform air waybill now in preparation will enable C & S later to issue a single document covering an entire shipment.

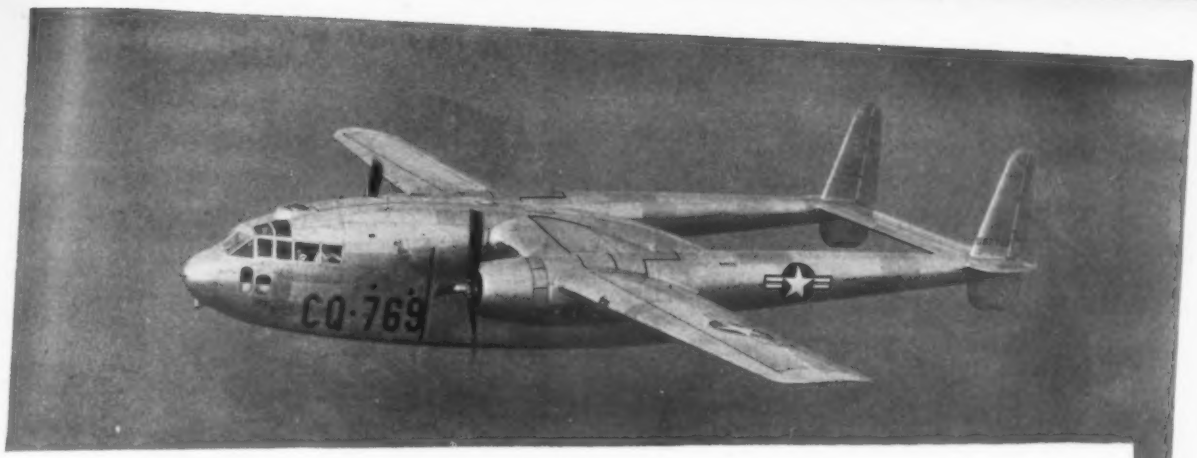
California Eastern Airways, through a working arrangement with American President Lines and Pacific Far East Lines, has developed an ocean-air through bill of lading which it expects will speed foreign cargo moving over its transcontinental routes.

CARGO TRAFFIC

Capital Airlines carried 3,175,092 pounds of cargo in January, a better than 80% gain over 1,758,830 pounds handled in same month last year.

United Air Lines reported a 128% jump in air freight volume in January over same month 1947, shipments this year totaling 1,117,591 ton miles, against 491,383. Air express amounted to 601,752 ton miles, as against 449,242, an increase of 34%.

Mid-Continent Airlines operated 47,888 ton miles of mail, express and freight in January, compared with 27,724 for same month last year.



Now! An Even Bigger, Better Flying Boxcar —The Fairchild Packet C-119

Something new in the air.

Out of the tried and proved first plane ever designed specifically for cargo-carrying has come this latest creation of Fairchild engineers—a super Packet.

Like the original C-82 Packet, the C-119 is a product of close cooperation between Fairchild, the Air Force and the Troop Carrier Command.

With increased payload, speed and climb, the new Packet can transport 12 tons of men, equipment and supplies 1500 miles non-stop. As an ambulance plane it is equipped to carry 36 litter patients and attendants.

This new Flying Boxcar incorporates improvements and modifications proved in thousands of hours of actual service. All in all, it is flying evidence of an air-transportable Army . . . and of Fairchild engineering and research skill.

Fairchild Aircraft

Division of Fairchild Engine and Airplane Corporation, Hagerstown, Maryland

International Volume Up

U. S. flag airlines flying international routes had far more competition from foreign carriers last year than ever before, but they appeared to thrive on it. Figures compiled from official company reports to the Civil Aeronautics Board tell the story:

During the 12 months ended Dec. 31, 1947, U. S. international airlines carried 1,348,172 revenue passengers and flew 1,809,588,000 revenue passenger miles, increases of 29.5% and 64.4% respectively, over the 1,041,127 passengers and the 1,100,574,000 revenue passenger miles flown in 1946.

Up by 112% was the number of ton miles of U. S. mail—12,690,530 in 1947, against 5,996,581 in 1946—reflecting in part the reduction in rates on overseas air mail which were effected last year. Express and freight soared to an all-time high of 31,187,546 ton miles, up about 110% over the 1946 figure of 15,092,127.

Load Factors Down. Single flaw in the picture was a slump in load factors. The passenger load factor fell off from 70.9% in 1946 to 62.0% last year, but this was because of the increase in number of available seat miles flown as routes were expanded and schedules added. Total ton miles of revenue traffic last year was well above that for 1946, but again because of a large increase in available ton miles flown, the total load factor dropped to 57.1%, as compared to 64.6% for the previous year.

Traffic fell off on Pan American Airways' Latin American Division to 717,109 revenue passengers last year, as against 729,997 in 1946, but every other U. S. international carrier shows gains ranging from 10% to better than 100%.

Major increases were in trans-Atlantic traffic. For example, American Overseas Airlines flew 59,606 revenue passengers across the Atlantic last year and TWA 67,461. In 1946, the same two carriers had 33,324 and 32,562 revenue passengers, respectively. Pan American's Atlantic Division, which included New York-Bermuda traffic as well as that across the Atlantic to Lisbon and beyond, increased from 66,569 revenue passengers in 1946 to 122,309 last year.

More Competition. These increases were accomplished, moreover, in the face of aggressive and ever growing competition from foreign flag carriers, who were few in numbers and were flying comparatively few schedules in 1946 but increased last year both in numbers and in scope of operations.

Last year marked the first full calendar year of operation on some of the international routes flown by U. S. carriers—EAL to San Juan, National to Havana, Northwest to Alaska and C & S to Havana. Others have less than a year's operations—Colonial started its Bermuda service in August, NWA opened its Orient route in July, and UAL inaugurated service to Honolulu last spring.

A complete summary of U. S. international airline traffic for the year 1947 appears below.

British Overseas Airways reports that its Atlantic Division carried 22,549 passengers and 1,135,472 pounds of freight and mail during the first nine months of current fiscal year—Apr. 1 through Dec. 31, 1947. London-New York route was most popular, with 7,484 passengers westbound and 4,840 eastbound; London-Montreal had 3,341 passengers, 2,283 of them westbound, and the Baltimore-Bermuda operation accounted for 6,884. Cargo included 576,624 pounds of mail and 351,471 pounds of commercial freight. Passengers-per-service average for all Atlantic flights was 27.7.

RESERVATIONS

Automatic Booking Machine

Development of an electro-mechanical device, an automatic booking exchange, designed to facilitate airline space reservations has been announced by International Telephone and Telegraph Corp. The company claims the equipment will ultimately reduce the cost of such operations up to 50%.

Using the equipment, each agent would be supplied with a keyboard and printer by means of which he will have access to information on all flights. He can transmit signals which will represent the customer's desires as to date, departure point, destination, and the automatic central equipment will record in the salesman's machine information as to whether the space is available.

The equipment also automatically examines other flights to find the one nearest the customer's need if the space requested is not available.

30-Second Service

During first eight months of operation of its centralized system of reservations control known as "Teleflite," TWA's reservations department handled 65,458,118 words on its teletype machines, according to R. G. Petitte, system manager of reservations.

Petitte said the "Teleflite" system's goal of informing 90% of the airline's customers within 30 seconds whether space is available on any designated flight for the next 30 days had been "fully realized." Figured on an annual basis, the teletype messages handled during the first eight months of the new system's operation would mean over 98 million words per year transmitted in inquiries and confirmations on TWA reservations.

U. S. International Airline Traffic for Calendar 1947

AIRLINES	REVENUE PASSENGERS	REVENUE PASSENGER MILES	AVAILABLE SEAT MILES	PASSENGER LOAD FACTOR	U. S. MAIL TON-MILES	FOREIGN MAIL TON-MILES	EXPRESS TON-MILES	FREIGHT TON-MILES	TOTAL TON-MILES REV. TRAFFIC	AVAILABLE TON-MILES FLOWN	% AVAILABLE TON-MILES USED	REVENUE PLANE-MILES	SCHEDULED MILES	% SCHEDULED MILES COMPLETED
American	66,325	58,548,000	99,455,000	58.9%	96,206	9,886	. . . .	1,541,955	7,963,678	14,627,978	54.4%	2,651,881	2,441,378	99.1%
Amer. O'Seas	59,606	168,360,000	248,111,000	67.9%	1,548,148	258,361	1925,720	. . . .	22,125,058	35,542,062	62.2%	7,342,881	7,429,555	95.5%
C & S	9,765	6,698,000	19,647,000	34.1%	1,447	. . . .	106	63,876	753,821	2,292,116	32.9%	471,111	500,050	93.3%
Colonial	4,248	3,335,000	9,936,000	33.6%	3,397	523	4,644	. . . .	344,832	967,738	35.6%	258,304	280,616	71.5%
Eastern	16,937	16,649,000	37,425,000	44.5%	30,372	. . . .	. . . .	145,319	1,907,995	5,575,856	34.2%	727,917	733,923	99.2%
National	32,006	9,531,000	19,142,000	49.8%	6,980	. . . .	106,143	. . . .	1,102,981	2,844,812	38.8%	418,042	422,035	98.6%
Northwest	19,644	35,668,000	81,782,000	43.6%	587,725	37,206	69,181	331,922	4,765,027	10,745,848	44.4%	2,741,765	2,800,568	97.8%
Panagra	111,246	106,526,000	180,611,000	59.0%	139,161	310,787	1655,308	7,674	13,346,436	23,886,936	55.9%	5,963,640	6,544,694	91.2%
Pan American														
Latin Amer.	717,109	398,521,000	1,096,572,000	54.6%	2,718,838	680,446	6842,914	. . . .	61,599,746	149,825,101	54.5%	30,607,522	31,082,975	96.9%
Atlantic	122,309	303,012,000	421,467,000	71.9%	1,770,936	583,046	3784,595	71,124	38,506,336	66,061,424	58.3%	11,845,298	11,793,751	92.4%
Pacific	67,957	204,194,000	295,247,000	69.2%	2,779,053	150,382	3161,215	. . . .	26,093,394	42,657,711	61.2%	10,970,812	10,562,469	97.9%
Alaska	36,682	37,623,000	74,714,000	50.4%	368,917	. . . .	515,362	. . . .	4,737,478	11,035,041	42.9%	2,378,709	2,463,885	85.0%
TWA	67,461	220,418,000	289,626,000	76.1%	2,438,046	776,964	3045,490	. . . .	31,191,800	46,799,373	66.6%	8,809,470	8,970,224	94.7%
United	16,877	40,505,000	47,257,000	85.7%	201,304	. . . .	76,868	. . . .	4,400,563	5,150,646	85.4%	1,173,635	1,132,835	100.0%
TOTALS	1,348,172	1,809,588,000	2,920,992,000	62.0%	12,690,530	2,807,601	31187,546	2161,870	238,839,145	418,012,642	57.1%	86,360,987	87,158,958	95.4%

NOTE: Data in above tabulations were compiled by American Aviation Publications from monthly reports filed by the airlines with the Civil Aeronautics Board. Figures for American Airlines include that carrier's service to Mexico but not to Canada; for C & S to Havana; for Colonial to Bermuda; for Eastern to Puerto Rico; National to Havana; Northwest to Alaska, and United to Honolulu. Operations of U.S. carriers into Canada are included in domestic reports to CAB, in accordance with CAB filing procedures.

The Birdmen's Perch

By *Major Al Williams*, ALIAS, "TATTERED WING TIPS,"
Gulf Aviation Products Manager, Gulf Bldg., Pittsburgh 30, Pa.

Hey, wait a minute!

We think we see a dangerous situation arising.

We're referring to roadable airplanes, of course. There are a couple of them just about ready for the market and frankly, we're worried.

Suppose a guy has been driving a car for 10 years and when he's on the road, he does almost everything automatically . . . you know, reflexes.

And suppose this same lad has been flying for the same length of time, and does most of his air work automatically, too.

Okay . . . so he gets into his roadable plane, lines up with the runway, and starts down the strip, buckety buckety buck. When she gets up to speed, he tugs back on the wheel (airplane reflex) and gets off.

Then he climbs—a little too steeply—until he feels her fret a little . . .

Then what?

Does he push the wheel (airplane reflex) or does he shift into second (car reflex)?

Or does he step on the brake (car reflex) to stop so that he can get out and look under the hood to see why she's so sluggish?

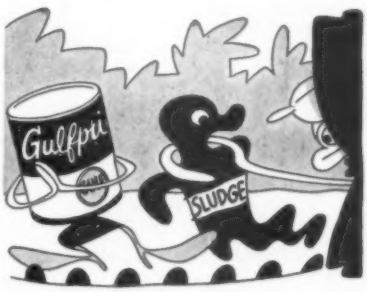
Somebody better investigate this problem before it's too late!

That's what!

HIDDEN DETAILS

From where we're writing, this month, we can look out a window and see an old building being torn down.

This building was a hotel which we've been in many times in the past. But we had no idea of the curious and fascinating inner details of such a structure until we saw floor after floor being stripped from this one.



Naturally we were reminded of Gulfpride Oil. (*Everything* reminds us of Gulfpride!)

We were reminded of the curious and fascinating "inner details" of crude oil. And how—when you "strip it"—you get literally hundreds of different substances and compounds from a crude in refining.

One of the products, of course, is lubricating oil. But even this refined product has a lot of molecules left which do not lubricate . . . troublemakers which make carbon and sludge.

That's where Gulf's exclusive Alchlor Process comes in! The Alchlor Process is an *extra* refining step which gets *extra* of the troublemakers out of the oil—makes Gulfpride the "world's finest"!

Try Gulfpride and see if it doesn't give you *extra* lubrication!

PLEASE, for the luvva Mike, will you write and let us know if you want to continue the "Little Known Facts Department" or substitute something like "Favorite Flying Gripes?"

TICKETING

Savings for Commuters

If a railroad can offer commuter tickets at reduced price to passengers making frequent trips between two nearby points, why won't the same thing work with a short-haul airline? West Coast Airlines thinks it will and has put the innovation into effect with approval of the Civil Aeronautics Board.

The commuter tickets, offering a saving of about 15% on each book of six tickets and 20% on a book of twelve, are available between Portland, Ore., and the following points: North Bend-Coos Bay, Astoria, Eugene, Medford and Seattle; also between Seattle and Bellingham, Olympia, Port Angeles, Aberdeen-Hoquiam and Astoria.

The tickets are good for either round-trip or one-way travel and are valid for a three-month period. Other short-haul airlines will watch the commutation experiment with interest.

AGENCIES

1,946 Agents for IATA

Certificates have been issued to a total of 1,946 passenger and cargo agencies in the United States, Canada, Alaska, Newfoundland and Bermuda, approving them as qualified to sell passenger and cargo space on behalf of any of the 68 airlines affiliated with the International Air Transport Association.

Agents who have met IATA's standards for certification can sign the standard IATA agency agreement with any member company and are eligible to receive the standard commission rate of 7½% on passengers and 5% on cargo. Each agency is automatically covered by a $100,000 fidelity bond negotiated by the head office of IATA on a worldwide basis.

Of the approved agents, 1,450 have been certificated for passenger sales, 160 for cargo sales and 136 for both.

The certification process is part of IATA's program to achieve worldwide uniformity and efficiency in traffic matters.

NEW SERVICES

Domestic

Braniff Airways has replaced its C-47 all-cargo plane on the Dallas-Chicago run with a convertible C-54 equipped with 42 fully upholstered folding seats, so that it can be operated either as an all-cargo plane, an all-passenger plane, or a combination plane.

Delta Air Lines has inaugurated service into Gregg County Airport, serving the communities of Longview, Kilgore and Gladewater, Tex., with one flight daily in each direction on its Fort Worth-Atlanta route and a like number daily on its Ft. Worth-New Orleans route.

Florida Airways has begun serving the recently certificated route point of Leesburg with five schedules daily, three northbound and two southbound. Service to another new point, Perry, is slated for the near future, with four flights daily on the Tallahassee-Orlando route.

Island Air Ferries, Inc., newly-certificated regional carrier, has set June 1 as target date for start of service over its routes linking Long Island and Connecticut points with New York City.

National Airlines inaugurated service to Washington on Feb. 25, just five days after being certificated by CAB to do so. Service at present is only on northbound flights from Miami to Newark. Service at Baltimore and Richmond will begin as soon as airport facilities can be arranged.

Northwest Airlines was planning to inaugurate service over its Detroit-Washington route extension, via Cleveland and Pittsburgh, on Mar. 15, with three daily round trips initially.

Wisconsin Central Airlines, after being delayed by snows and extreme cold for more than three weeks, inaugurated service on Feb. 25 to 19 of its certificated route points in Illinois, Minnesota and Wisconsin, using Lockheed Electra equipment. Minimum service to each city is two flights daily, with increases to four daily planned by May 1.

International

American Overseas Airlines is now flying twice weekly-round-trips between Frankfort and Berlin, affording German nationals their first postwar commercial air service. AOA has been serving both cities for some time, but only war brides and a few German businessmen bound for the U. S. had been permitted to use the service within Germany.

Irish Air Lines, which had originally expected to make its first Dublin-New York flight on Mar. 17, has had to postpone the start of service until late spring.

KLM Royal Dutch Airlines on Mar. 2 began flying its twice-a-week Amsterdam-Johannesburg service with Constellation aircraft, cutting flying time from 45 to 30 hours and eliminating the overnight stop previously made in Leopoldville. KLM also has begun serving Singapore with one round-trip weekly on its Amsterdam-Batavia route.

Pan American Airways has inaugurated service over its direct route from New York to Johannesburg, South Africa, via the Azores, Dakar, Accra and Leopoldville. Scheduled time is less than 44 hours. One round-trip weekly is flown at present, with departures from New York on Thursdays and Johannesburg on Sundays.

Trans-Canada Air Lines is aiming for July 1 as date for starting 14-hour service between Montreal and Vancouver. Its trans-Atlantic service between Montreal and the United Kingdom will be increased to two round-trips daily on June 1.

High Cost of Feeding

Food service management is one of the trickiest problems in the air transportation business.

The free meal has come to be accepted as part of the ride on the airlines and it is a feature of air travel that passengers talk about most, but keeping up the quality and holding down costs require unrelenting daily attention to a multitude of details.

Food costs have increased about 40% in the last two years, but the outlay for the meals themselves is the least of the problems involved. The factors that cause the management headaches are waste, ground handling, lost equipment and similar intangibles, including that blight of the airline business, the "no-show."

To the traffic department, the "no-show" represents an empty seat and the loss of revenue, but to the passenger service department he represents an actual out-of-pocket cost. Marvin W. Landes, vice president of customer and station service for Western Air Lines, polished a fine point on his pencil and came up with the surprising figure of $5 as the actual out-of-pocket cost for each "no-show." Of this approximately $3 was for the meal that was ordered, put aboard the airplane and wasted. In his computations, Landes figured all costs, including investment in equipment from trays and silverware to the commissary trucks required to handle the service at the airports, cost of supplies, ground handling and so on.

Costly Coffee. Airlines purchasing their flight meals from caterers pay about $1.20 for a breakfast, $1.35 for a luncheon, $1.55 to $1.75 for a hot dinner. Airlines having their own commissary kitchens may shave these costs somewhat. And they don't have to pay $2 for a gallon of coffee as Western does in at least one instance. But they can't escape the damage caused by rough handling. As an example of how expensive this is, Western Air Lines recently paid out $6,000 for new glass lining for thermos bottles damaged by rough handling.

With a set of food service equipment for a DC-4 costing $800, equipment losses can run up a big bill in short time. What happens to lost equipment? Strangely enough, the swiping of silverware by passengers seeking souvenirs is a negligible item. The prime factor is careless handling in catering establishments, whether airline owned or not.

Western Air Lines, for example, recently tabulated its equipment losses and found that its equipment had strayed to practically every other airline in the United States and that, by the same token, equipment from every other airline had found its way onto Western ships.

Western and Eastern are miles apart, yet Western returned to Eastern 34 knives, 55 forks, 36 spoons, 18 two-quart thermos bottles and nine two-quart spigot assemblies that had been mishandled in various commissaries to such an extent they had made their way from Florida to the Pacific Coast.

The mystery of straying equipment was made more baffling by a capitulation of Western's figures. It found it had returned 862 pieces to other airlines, but had received only 207 pieces in return, a difference of 655 pieces. No doubt, the other airlines making similar capitulations would come up on the losing side, too, because of the difficulty of tracking down a knife, fork, spoon or thermos bottle once it starts traveling.

Seeking to take some of the costly guess-work out of scheduling meals aloft, R. H. Moebus, director of food and supply for Western Air Lines, recently introduced a manual covering every detail of handling at the airline's 12 catering points. It especially outlines the procedures the reservations department, which has to determine how many meals go aboard a flight, should follow. Since introducing the manual Western has reduced the number of unused meals from 27% to 16%.

Economy in Planning. Western also has started merchandising its food service by telling passengers what they will receive aboard a given flight. On an 8 a.m. flight, for example, each passenger will be advised that a hot breakfast will be served so that he will take advantage of the service and the breakfast placed aboard for him won't be wasted Similarly, late passengers who book after the meals for a flight are ordered, will be told that they won't get breakfast, lunch or dinner unless some other passengers pass theirs up. The names of such late passengers are given to the stewardess so that she will be aware of who is to be served and who isn't.

Two of the major problems in avoiding unused meals are shifting reservations and misconnections. Frequently 150 passengers will go on and off the reservation chart on a DC-4 flight. Under such circumstances it is easy to guess wrong on the number of meals to put aboard. It costs not only the seat but the out-of-pocket cost for a meal when a connecting flight on another airline arrives and a scheduled passenger isn't aboard. But it happens frequently, because air travel is so fast that a dispatch on an arriving flight more often than not is received after the meals for a departing connecting flight have been ordered. And another $3 is lost.

Atlantic Comfort— Sleeperette service, which Pan American Airways' Pacific-Alaska Division inaugurated last summer, made its official debut over the Atlantic Feb. 25 when PAA began direct weekly flights between New York and Union of South Africa. The foam rubber lounge chairs are converted for comfortable sleeping at touch of a button. The curved back tilts backward to a 70-degree slope.

UAL's Omaha Cupboard

Table equipment used in the serving of some 13,000 sky meals a day tends in time to become worn and battered, and even to "disappear," and its repair or replacement becomes a sizeable operation for a large airline like United. To handle this operation, UAL is now establishing at Omaha one of the country's largest "kitchen cupboards," from which all tableware for the line's 144 planes will be distributed and to which it will be returned for repairs.

Included in the "cupboard" are more than 119,000 cups, 73,000 knives, forks and spoons, 31,000 casseroles and 11,000 thermos bottles. Nearly $25,000 worth of these articles are worn out or lost each month and have to be replaced, according to company officials, and the remainder, valued at close to a million dollars, must be maintained in first class order.

The Omaha establishment will have nothing to do with preparation of meals, which will continue to be prepared in UAL's 14 flight kitchens from coast to coast.

Trans-Texas Airways has started to shift from male flight attendants to stewardesses. Following the Texas motif, the company is putting its stewardesses into cowgirl uniforms—skirt, bolero, silk blouse, neckerchief, western hat and boots. Colors are navy blue and gray with lemon trim. Replaced flight attendants will move to ground station assignments.

Pan American Airways' Pacific-Alaska Division has transferred its passenger service department from the operations department to the traffic department, under Harvey Hancock, director of traffic.

KLM Royal Dutch Airlines will soon make portable altars available to Roman Catholic priests traveling on its planes. The portable altars will be contained in special cases, including everything needed for celebrating mass.

Advertisers In This Issue

Classified Advertising

The rates for advertising in this section are as follows: "Help Wanted," "Positions Wanted," "Aircraft Wanted or For Sale," and all other classifications $1.00 a line, minimum charge $4.00. Estimate bold face heads 30 letters and spaces per line; light body face 40 per line; box numbers add two lines. Terms, cash with order. Forms close 20 days preceding publication date. Rates for display advertisements upon request. Address all correspondence to Classified Advertising Department, AMERICAN AVIATION PUBLICATIONS, 1317 F Street N. W., Washington 4, D. C.

Braniff Teaches Students

University of Texas seniors majoring in air transport this month got out of the classroom and began to learn first hand about what makes an airline "tick."

This program of supplementing theory with practice is being carried out in cooperation with Braniff Airways, which is giving the students 43 hours of "Laboratory" work in its traffic and operations departments in Austin and later will take the more apt students to the Braniff base at Love Field in Dallas for additional instruction.

Guided by experienced Braniff personnel, the students are learning about such activities as reservations, ticketing and office procedures, cargo handling, communications, airport operations, airport office handling and sales and promotional contacts.

This laboratory work is being supplemented by lectures given by supervisors from Braniff's general headquarters and by Jerry W. Martin, assistant professor of transportation at the university and originator of the air transport course.

Continental Air Lines has given its Link Trainer to West High School, Denver, for use in connection with the teaching of aviation subjects, and is replacing the trainer with a new Link incorporating ILS and radar instrumentation. Over 100 schools had applied for the trainer when it was learned it was to be given to a deserving institution.

A 12-page illustrated pamphlet containing a complete description of the use, installation and ratings of AGA high intensity runway lighting is now being distributed by the Apparatus Department, General Electric Co., Schenectady 5, N. Y. Prepared for use in answering an increasing number of requests for data on the AGA equipment, the pamphlet is designated GEA 4931. Copies may be obtained on request from General Electric or from American Gas Accumulator Co., 1027 Newark Ave., Elizabeth 3, N. J.

FOR SALE

FOR SALE—Twin Engine D-18-S Beechcraft. Total time engines and aircraft 481:00 since new. Five beautifully upholstered reclining chairs. Completely equipped for instrument and night operation. Dual ADF, Lear UT-6 transmitter, range receiver, marker beacon receiver. This airplane powered with Pratt & Whitney R-985-AN-4 engines. Excellent condition throughout. Price upon request. Box No. 604, AMERICAN AVIATION, 1317 F St., N. W., Washington 4, D. C.

FOR SALE C-54 A

- **JUST LICENSED**
- **CARGO INTERIOR**
- **3600 TOTAL HOURS**
- **P&W R 2000-7 ENGINES**
- **ENGINES—JUST MAJORED**
- **ALL MOD. COMPLETED**
- **FUSELAGE TANKS**

Box No. 603, American Aviation, 1317 F St., N. W., Washington 4, D. C.

FOR SALE:

1—Set C-54-A Wing Panels

1—Lot New Parts For Lockheed Electra Airplanes

1—Lot New Engine Parts Wright R-975-E3

ALASKA AIRLINES, INC.
501 Fifth Avenue
New York

Technical Development Report No. 55, prepared by J. M. Lee and H. I. Metz, of the CAA's Technical Development Service, gives a detailed technical description of the development of a straight-line glide path and a summary of the tests made at the Indianapolis Experiment Station leading up to its development. The booklet, now available from CAA Information and Statistics, runs to 34 pages and is profusely illustrated.

WINGS OF YESTERDAY

25 Years Ago

The night flying section of the transcontinental mail airway which the Post Office Dept. was organizing between Chicago and Cheyenne, Wyo. was to be ready for service in the late spring of 1923, according to a statement by Carl F. Egge, superintendent of air mail in the Post Office Dept.

•

A new Belgian Air Line, SABENA, was to inaugurate an airway service between Brussels and London with an extension to Cologne.

10 Years Ago

(In AMERICAN AVIATION)

Subject to approval by the stockholders, Eddie Rickenbacker and a financial group including Smith, Barney & Co. and Kuhn, Loeb & Co., completed arrangements March 4, 1938 for purchase of Eastern Air Lines division of its parent corporation, North American Aviation, Inc. for $3,500,000.

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Seven airlines on Feb. 21, 1938; filed answers to the government's counterclaims in connection with the $7,500,000 suits entered by the airlines following cancellation of air mail contracts in 1934. The seven lines still asking that the suits be settled were United Air Lines Transport Corp., Boeing Air Transport, Pacific Air Transport, Pennsylvania Air Lines, United States Airways, Kohler Aviation Corp., and Eastern Air Transport.

LETTERS

Overseas Air Mailing

To the Editor:

I read with much interest the editorial in the Feb. 15 *American Aviation* regarding the stand you have taken on air mailing American publications to the territories and possessions of the United States.

A good example of the advantage of airmail is a comparison of the *American Aviation Daily* and the *American Aviation Magazine*. The *Daily* is sent by air mail and we receive it within three days after it is published. The *American Aviation Magazine* is usually *at least* three weeks late.

I certainly appreciate your going to bat for us and know the residents in other territories or possessions of the United States feel the same. We are in dire need of better mail service.

STANLEY C. KENNEDY, Pres.,
Hawaiian Airlines Ltd.

Futility of Strike

To the Editor:

In the near future, I hope you will write an editorial discussing the stupidity and futility of the National Airlines strike now going on.

It seems that few of the participants, excepting of course, the union leaders, fully comprehend the issues involved. As a non-striking operations agent on National, I am completely in the dark. Although I have talked to numerous pilots and IAM pickets in Tampa, Jacksonville, and Miami, I have been given no concrete information. They cannot intelligently discuss what they don't understand.

The IAM claims that the clerks are striking for a contract and better wages, but the union officials have never stated what they will demand in the way of a contract or a wage raise. Now it is doubtful if the IAM can consider one fourth or even one eighth of the clerks employed by National among its members. The IAM maintenance men have a no-strike contract, and therefore no legal basis for a strike. Yet they are most vociferous in their demands. They frequently walk in the picket lines and are rumored to have been responsible for most of the violence at Miami and Jacksonville. Both groups, the pilots and maintenance men, are as highly paid as similar groups throughout the industry.

The ALPA is afraid the National aircraft may be unsafe because they are serviced by non-union maintenance men. It is hardly likely that the CAA would certify each trip safe before departure if it were not so. It boils down to a case of a sympathy walkout, or shadow-boxing, between the ALPA and the air transport industry on such issues as subcontracting and equipment pooling which have not been mentioned up to now.

National has expanded because of its acknowledged superiority over its competitors, and the loyalty, friendliness, and ability of its personnel, flying and non-flying. Again it has been granted a route extension, and has hopes for a southern trunkline route to California. All the gains of the past ten years soon will be lost and this company destroyed through the selfishness of a few individuals and their ability to influence others without making any promises.

Most of the men, flying and non-flying, striking and non-striking, cannot afford a long layoff without pay. The lucrative winter season is coming to an end, and our competitors are quickly absorbing our trade. No one will win; everyone stands a good chance of losing including the industry and the Pilot's Association. An answer must be found before it is too late.

NAME WITHHELD BY REQUEST.

BOOKS

AIRLINERS AND AIRWAYS OF TODAY, by S. E. Veale, Pilot Press Ltd., 45 Great Russell St., London, England. 328 pp. 21s net.

Scope of this volume is much more limited than suggested by the title. Discussion is limited to the race for leadership in the air between the United States and Great Britain, since details available from other countries that may produce transports for international use were not complete enough to justify consideration at this time.

The author surveys the technical, political, operational, social and economic aspects of air transportation, ranging from aircraft design to airport management. While characteristics of the newest transports are described no attempt is made to compare directly British and American types. Since the British aircraft industry had to abandon work on transport types for the greater part of the war and has thus lagged behind, it was felt that comparisons would be better left for another year or two.

In discussing British-American air rivalry, Veale expounds on the well-worn thesis that "today the Americans are ahead of the British in airframe design and Britain ahead of America in aero-engines. Experts who are familiar with progress in both countries insist that Britain's lead in gas-turbines for jet and airscrew propulsion is so marked that America has no hope of making good the leeway unless she buys British powerplants or builds them under license. The British lead in gas-turbine engines, now, may be large, but only a display of energy comparable with that which established the lead will ensure its continuation."

Looking ahead, Veale shows broad appreciation for potency of the airplane as a political and economic instrument: "Within 10 to 15 years the aeroplane may have readjusted the distribution of power. By cultivating and exploiting air commerce a small nation may have become a great Power, and by neglecting air commerce a large and powerful nation may have fallen to a position of inferiority. Air transport is a factor in world affairs that cannot be ignored by the great or the small."

PRACTICAL AIR NAVIGATION (Commercial Edition), by Thoburn C. Lyon, 8814 Reading Road, Silver Spring, Md., 356 pages plus study chart. Single copy $2.50, discounts on quantity orders. (See Navigation)

BEHNCKE

(Continued from Page 17)

can lick them"—while they carry his passengers and, in the end, the moneyed interests are going to get very sick of Baker, his friend Gibbs, Jr., and their ATA. So far as the CAB is concerned and official Washington, they are taking their usual fence-riding, pussy-footed stand. Their antics remind one of a sleepy-looking marsh bird—today he stands on one foot and tomorrow the other—maybe.

The Association will sue Baker for breach of the National pilots' employment agreement. The Association will go after his "certificate of convenience and necessity" for non-compliance with the Civil Aeronautics Act of 1938 and Title II of the Railway Labor Act. We shall sue him for everything on which we can build a case.

He has flagrantly violated both the Railway Labor Act and the Civil Aeronautics Act of 1938. He has ridden roughshod over everything and everybody who has opposed him in an effort to cause him to settle the strike or permit the National Mediation Board to settle it—the Board that has the authority and jurisdiction to settle the strike. Knowing Baker, his tactics, methods, and purpose, every airline pilot will realize what this situation amounts to. It's a cold, hard fight. Make no mistake about that.

The National Airlines pilots must be assisted, not only with strike benefits until the strike is over, but every airline pilot will have to help them win the strike. Picketing and public education squads will be organized at all of the principal division points on National. The National Airlines pilots are not going to be able to man all these activities. They will need help and plenty of it. Further instructions on this will be issued shortly.

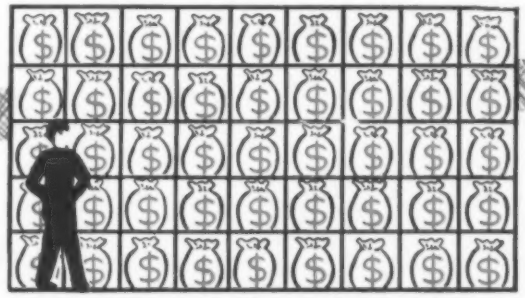
In the interim, mail your strike assessment to Headquarters promptly. There has been severe criticism about ALPA slowness in collecting and paying strike benefits. ALPA can move only as fast as its members. This time, let's make things snap. It will show the National pilots they have the backing of the nation's airline pilots 100 percent and no fooling. What it takes to stop "Well, you know G. T. Baker," the airline pilots have but it can't be done sitting down. *We will all have to rise up and start swinging.*

Sincerely yours,

AIR LINE PILOTS ASSOCIATION,
(S) David L. Behncke,
President.

question for airline executives...

What Inventories Must You Carry?



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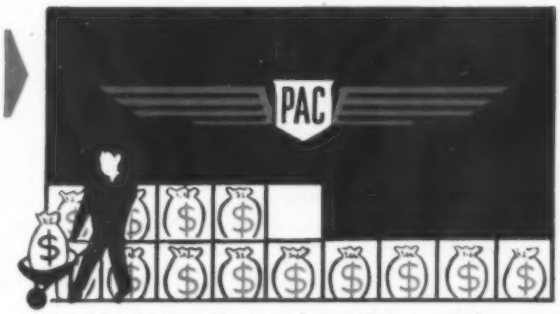
Why not free this capital to produce revenue —by using the already-established, complete inventories held by Pacific Airmotive at conveniently located bases?



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